ABSTRACT

EXTENDING SELF-DISCREPANCY THEORY TO
THE SOCIAL ROLE OF MOTHER

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Three studies were conducted in order to extend self-discrepancy theory to an online sample of mothers, both in terms of global self-discrepancies (i.e., self-as-person) and as they relate to the specific social role context of mother (i.e., self-as-mother). Study 1 yielded minimal support for the application of self-discrepancy theory to a sample of mothers. Study 2 yielded partial support for the specificity of the relationships between self-discrepancies from the social role perspective of mother and negative emotions, with ideal discrepancies predicting dejection. Results indicated that self-discrepancy accessibility did not moderate the relationship between self-discrepancies and negative emotion. Study 3 replicated the main findings of Study 2. Combined, these studies provide some support for the application of self-discrepancy theory to the social role of mother.

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EXTENDING SELF-DISCREPANCY THEORY

TO THE SOCIAL ROLE OF MOTHER

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CHAPTER 1

INTRODUCTION

Self-discrepancy theory maintains that individuals' evaluations of themselves as less than either a self-perceived ideal or obligatory standard lead them to experience emotional distress (Higgins, 1987). The theory is distinct from other self-evaluation theories (e.g., James, 1948; Mead, 1934) in that it predicts the specific type of negative emotion people experience when failing to meet self-imposed standards (Higgins, 1987). Falling short of a perceived ideal is associated with depression ,whereas failing to satisfy perceived obligations is associated with anxiety. These predictions make it possible to explore depression and anxiety through the lens of self-evaluation. Much of the self-discrepancy theory literature examines the evaluation of oneself as a *person* in university student samples (e.g., Phillips & Silvia, 2010; Scott & O'Hara, 1993; Strauman & Higgins, 1988). Although this has certainly informed the literature, findings from university student data may not generalize to other populations; the time has come to extend the literature by applying self-discrepancy theory to non-university adult samples.

In addition, the theory may contribute even more to our understanding of self-evaluation, depression, and anxiety if it were applied to social roles; that is, examining self-evaluations from the perspective of a social role, such as that of mother, teacher, or employee, may prove to be informative. For example, asking teachers about the kind of person they

think they should be inquires about general characteristics they think they should have, whereas asking them what kind of *teacher* they think they should be inquires about characteristics specific to their role as a teacher.

Applying self-discrepancy theory to the social role of mother may be particularly relevant, as it is not uncommon for mothers to experience depression and anxiety. In a nationally representative sample, 10% of American mothers experienced major depression in the past year, and 43% of those mothers also had an anxiety disorder (Ertel, Rich-Edwards, & Koenen, 2011). Maternal depression is particularly concerning because research has shown that maternal depression has wide-ranging negative associations with parenting behavior and child outcomes (Burke, 2003). For instance, depressed mothers showed more hostility and coercion when managing their children's behavior than did non-depressed mothers (Downey & Coyne, 1990; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Depressed parents also reported that their children had more depression, anxiety, and problems at school and when interacting with their peers than did non-depressed parents (Billings & Moos, 1983). In addition, maternal depression has been negatively associated with the quality of marital relationships; one study found that depressed mothers tended to experience more conflict in their marriages than do non-depressed mothers (Burke, 2003). Furthermore, spouses of individuals with major depression have been shown to be at greater risk for becoming depressed than spouses of non-depressed individuals (Benazon & Coyne, 2000).

However, the negative associations among maternal depression, parenting behavior, child outcomes, and marital relationships are not necessarily unique to *clinical* depression; research exploring these associations have found that they exist in families with mothers whose symptoms of depression did not meet or did not surpass clinical diagnostic thresholds

(Downey & Coyne, 1990; Lovejoy et al., 2000). This suggests that many mothers and their families are at risk. Therefore, investigating if self-discrepancy theory related to the role of mother is linked to symptoms of depression and anxiety is important and would have clinical implications. For instance, clinicians could help their clients think about how their evaluations of themselves as mothers (as well as other social roles) are connected to their emotions and influence their depression and anxiety.

Self-Discrepancy Theory

Self-discrepancy theory identifies three domains of the self: the actual, ideal, and ought selves (Higgins, 1987). The *actual self* refers to the attributes one currently believes to have. The *ideal self* refers to the attributes one would ideally possess, whereas the *ought self* refers to the attributes one feels morally obligated to have. Higgins (1987, 1989a) refers to these domains as "self-guides." The ideal self and the ought self provide the standard against which the actual self is evaluated.

The foundation for self-guide creation is built in childhood. As children's cognitive capacities mature, they more readily recognize relationships between behavior and positive or negative outcomes. Children learn through interactions with caretakers that some behaviors bring about positive outcomes and other behaviors bring about negative outcomes (Higgins, 1989a, 1989b; Strauman, 1992). For example, sharing a toy is likely to be praised by a caretaker, thereby eliciting a positive outcome, whereas neglecting to use a toothbrush is likely to be reprimanded by a caretaker, thereby eliciting a negative outcome. By adolescence, individuals begin to recognize that, in addition to behaviors, personal

characteristics are related to positive outcomes and negative outcomes. In addition, they are able to make distinctions between characteristics they actually possess (i.e., the actual self) and characteristics they would like to have so as to secure positive outcomes (i.e., the ideal self), and characteristics they believe they are obligated to have so as to avoid negative outcomes (i.e., the ought self; Higgins, 1989a, 1989b). Finally, because self-guides develop out of personal experience during childhood and adolescence, and everyone's life experience is unique, the content of individuals' self-guides are likely to vary. For instance, *wealthy* is probably a part of some people's ideal self, but is probably not a part of everyone's ideal self.

Congruence between the actual and the ideal selves is associated with the presence of positive outcomes (Higgins, 1987, 1989a). For example, if an individual's ideal self is to be generous and entertaining, and the individual's actual self is also generous and entertaining, the individual will experience positive outcomes, such as feeling satisfied and being well-liked. However, if an individual's actual self is miserly and unamusing, the incongruence (i.e., discrepancy) between the actual self and the ideal self would represent an *absence* of positive outcomes, which has been associated with depressive emotions such as dejection, sadness, and disappointment (Higgins, 1987, 1989a). Conversely, congruence between the actual and ought selves is associated with an absence of negative outcomes (Higgins, 1987, 1989a). For example, if an individual's ought self is patient and cautious, and the individual's actual self is also patient and cautious, the individual will avoid experiencing negative outcomes, such as making unnecessary mistakes or being criticized. However, if the individual's actual self is impatient and impulsive, the incongruence (i.e., discrepancy) between the actual self and the ought self would represent the *presence* of negative outcomes, which has been associated with anxious emotions such as agitation, embarrassment, and

worry (Higgins, 1987, 1989a). Given that self-discrepancies develop out of the unique experiences of their childhood and adolescence, individuals associate unique positive and negative outcomes to their perceived self-guide congruence or incongruence. Finally, self-discrepancy theory also predicts a positive relationship between self-discrepancy size and the magnitude of emotional distress: larger discrepancies are associated with greater degrees of emotional distress (Higgins, 1987, 1989a).

Support for self-discrepancy theory has been found in both correlational studies (Boldero & Francis, 2000; Hardin & Lakin, 2009; Higgins, Klein, & Strauman, 1985; Scott & O'Hara, 1993; Strauman, 1989; Strauman, Vookles, Berenstein, Chaiken, & Higgins, 1991) and experimental studies (Higgins, Bond, Klein, & Strauman, 1986), as well as in clinical (Fairbrother, & Moretti, 1998; Scott & O'Hara, 1993; Strauman, 1989, 1992) and non-clinical samples. For example, in a test of self-discrepancy theory, Higgins et al. (1985) assessed undergraduates' self-discrepancies with the Selves Questionnaire and emotional distress with a variety of common depression and anxiety measures, including the Beck Depression Inventory (BDI) and the Hopkins Symptom Checklist; emotional distress was assessed at the item level such that each item was correlated with self-discrepancies.

As expected, partial correlations controlling for the ought discrepancy revealed a positive association between ideal discrepancies and depressive symptom items and a negative association between ideal discrepancies, as well as 90% of anxiety symptom items. Similarly, partial correlations controlling for ideal discrepancies revealed a positive association between ought discrepancies and anxiety symptom items and a negative association among ought discrepancies, as well as 90% of depressive symptom items. The general prediction that ideal discrepancies are uniquely associated with the presence of

depressive symptoms and ought discrepancies are uniquely associated with the presence of anxiety symptoms appears to be emphasized, given that the vast majority of depressive symptom items were negatively associated with ought discrepancies and anxiety symptom items were negatively associated with ideal discrepancies.

Scott and O'Hara (1993) also found support for self-discrepancy theory in clinically depressed and anxious undergraduates. They divided participants into three groups according to the disorder(s) for which they satisfied criteria based on semi-structured interviews: depressed, anxious, and depressive-anxious (those who met criteria for concurrent depression and anxiety disorders) groups. They also included a comparison group of non-clinical undergraduates. Results from self-discrepancy and emotion measures indicate that clinical participants reported having larger self-discrepancies than non-clinical participants. Furthermore, participants in the depressive and depressive-anxious groups reported larger ideal discrepancies than non-depressed participants and did not have significantly larger ought discrepancies than non-depressed participants. Similarly, participants in the anxious and depressive-anxious groups reported larger ought discrepancies than non-anxious participants, and did not have significantly larger *ideal* discrepancies than non-anxious participants. These findings support self-discrepancy theory in that ideal discrepancies were uniquely associated with depression and that ought discrepancies were uniquely associated with anxiety.

It should be noted, however, that not all relevant research has supported the predictions of self-discrepancy theory. One criticism of self-discrepancy theory is that the distinction between ideal and ought discrepancies is suspect due to high correlations between them in the literature, ranging from .53 to .80 (Boldero, Moretti, Bell, & Francis, 2005; Phillips & Silvia, 2010). Despite such correlations, Phillips and Silvia's (2010) confirmatory

factor analyses revealed that a perfect correlation between the ideal and ought discrepancies worsened the fit of their model, which suggests that they are, in fact, distinct constructs. Some researchers suggest that these high correlations could, in part, be due to a "generalized discrepancy component" that is shared by both ideal and ought discrepancies (Boldero et al., 2005), much in the same way that the tripartite model of depression and anxiety (Clark & Watson, 1991) incorporates a general distress element in addition to distinct depression and anxiety elements.

Some researchers have found that although self-discrepancies were associated with emotional distress, the specificity in the relationships between ideal discrepancies and depression and ought discrepancies and anxiety were not consistently supported; specifically, ideal discrepancies and ought discrepancies were related to both depression *and* anxiety (Ozgul, Heubeck, Ward, Wilkinson, 2003; Phillips & Silvia, 2005; Tangney, Niedenthal, Covert, & Barlow, 1998). This lack of specificity in relationships between self-discrepancies and emotional distress could be due to negative affect, which has been shown to be a shared characteristic of depression and anxiety (Watson, Clark, & Carey, 1988). In addition, many of the self-report depression and anxiety measures that have been used in self-discrepancy research (e.g., Multiple Affect Adjective Check List, Symptom Checklist-90, Hopkins Symptom Checklist) have been shown to have less than ideal discriminate validity (Clark & Watson, 1991).

Another possible explanation for the lack of specificity some researchers have found in the relationships between types of self-discrepancies and depression and anxiety could be the result of weak or inconsistent self-discrepancy measurement (Phillips & Silvia, 2010). Self-discrepancies are usually measured with the Selves Questionnaire (Higgins et al., 1985),

but this measure has been criticized for being too complicated (e.g., Tangney et al., 1998), as it can require participants to list up to 60 adjectives describing their various selves and requires researchers to subjectively judge synonymous and antonymous matches and mismatches between them. The high degree of subjective interpretation required in this method could at least partly explain inconsistent findings. In addition, the Selves Questionnaire lacks instruction for how a researcher should interpret an attribute that is listed for one self-guide but does not have a synonymous or antonymous match or mismatch in another self-guide. Because of this, some researchers have begun to measure self-discrepancies in new ways, in which participants essentially measure their own self-discrepancies by rating the extent to which they possess idiographic attributes that they identify (e.g., Hardin & Lakin, 2009; Shah, Higgins, & Friedman, 1998).

Finally, Higgins (1999) suggests another explanation for the lack of specificity in the relationship between type of self-discrepancy and type of emotional distress. He suggests that some researchers (e.g., Tangney et al., 1998) have not accounted for factors that have been shown to moderate the relationships between self-discrepancies and emotional distress, which would naturally influence outcomes.

Factors Moderating Self-Discrepancies

Some important factors have been suggested to influence the relationship between self-discrepancy and emotional distress. First, self-discrepancy theory assumes that people are motivated to align their actual selves with standards (i.e., self-guides) that are important to them, but people differ in terms of which standards they find important (Higgins, 1987,

1989a). Put another way, one must first desire a particular standard before experiencing the emotional distress associated with not achieving that standard, which brings the self-discrepancy into existence. Higgins refers to the existence of a self-discrepancy as the *availability* of a self-discrepancy. For example, individuals are not bothered by not being athletic if they do not desire to be athletic (i.e., self-discrepancy is unavailable), but they *are* bothered by not being athletic if they do desire to be athletic (i.e., self-discrepancy is available). The divergence between the actual self and the ideal or ought self is what creates a self-discrepancy, and the extent to which the actual self diverges from the ideal or ought self is the extent to which the self-discrepancy is *available* to an individual.

However, in addition to being available, a discrepancy must also be *accessible* to be associated with emotional distress (Higgins, 1987, 1989a). In the same way that an event can exist in one's memory (availability) and one must be able to recall (access) the memory in order to be influenced by it, so too must one be able to access the discrepancy in order for it to influence emotional distress. Considering the example from above, individuals who are not athletic but desire to be so are likely to be bothered by that self-discrepancy when completing a questionnaire about their athletic abilities because the "memories" of their shortcomings have been recalled (i.e., accessed). On the other hand, if those same individuals are completing a questionnaire about their shopping behaviors or academic abilities, the memories of their athletic shortcomings will not be recalled and they will not experience the emotional distress associated with them.

Strauman (1992) conducted an interesting longitudinal study illustrating how self-discrepancy accessibility is related to the emotional valence of childhood memories. At Time 1, undergraduates completed measures of depression (which Strauman referred to as

dysphoria) and anxiety. Based on their responses, participants were then divided into four groups: high dysphoria/high anxiety, high dysphoria/low anxiety, low dysphoria/high anxiety, and low dysphoria/low anxiety. At Time 2 (one month later) they completed the Selves Questionnaire in an interview format, indicated which attributes on a predetermined checklist described themselves, and completed the depression and anxiety measures again. At Time 3 (about one month after Time 2), participants were presented with a variety of words, including (a) affect descriptions (e.g., happy, dissatisfied), and words that had been derived from (b) their unique responses to the Selves Questionnaire, (c) their unique responses to the self-description checklist, and (d) other participants' responses, though they were not informed of where the words had been derived. For each word, participants were then instructed to describe the earliest memory (from middle school years or before) that the word triggered. Their memories were then analyzed for dysphoric or anxious content according to type of cue given.

Results supported the general predictions of self-discrepancy theory in that participants in high dysphoria groups had larger ideal discrepancies than did those in low dysphoria groups, and participants in the high anxiety groups had larger ought discrepancies than did those in low anxiety groups; moreover, the unique association between ideal discrepancies and dysphoria and ought discrepancies and anxiety were stable over time. In addition, word cues derived from participants' self-guides elicited faster recall of childhood memories than did the other kinds of cues, and between-group differences in the emotional content (dysphoric or anxious) of the recalled memories appeared only in response to cues derived from their self-guides. Furthermore, the memories recalled from self-guide-derived cues contained more negative emotional content than did memories recalled from other cues,

and these cues were the only ones that elicited an overall trend of negatively valenced memories from participants in the high-distress groups. These results illustrate that accessible self-guides are closely connected with important emotional events of childhood. They also suggest that activation of self-discrepancies (i.e., self-guide-derived cues) is associated with memories of negative emotion.

Life events, such as becoming a parent, can also influence self-discrepancy accessibility. One longitudinal study conducted on married couples examined how becoming parents influenced the relationship between self-discrepancies and negative emotion (Alexander & Higgins, 1993). The authors assessed self-discrepancies from a global, self-as-person perspective and hypothesized that the demands of parenthood would inhibit parents' abilities to achieve their personal aspirations, wishes, and hopes, thereby increasing activation of the ideal discrepancy, which would contribute to increased feelings of dejection. Support for this hypothesis was found. The authors also presented two competing hypotheses related to ought discrepancies, which can be influenced by the perceived expectations of others. The first hypothesis was that the responsibilities of parenthood would shift one's attention from the obligations and duties of one "family" role (i.e., spouse) to those of an alternative family role (i.e., parent), thereby making the spousal role less salient (i.e., less accessible) and decreasing the agitation associated with the ought discrepancy. The second hypothesis was that shifting attention from the obligations of the spousal role to those of the parental role would lead to increased accessibility of ought discrepancies, as the new parental role could serve as a trigger for shortcomings related to the spousal self-guide. Increased accessibility of ought discrepancies would then be associated with increased feelings of agitation. Support

was found for the former ought discrepancy hypothesis, suggesting that social role salience influences self-discrepancy accessibility and negative emotion.

Self-discrepancies can also be activated (i.e., accessed) through direct priming. Higgins et al. (1986) explored the relationship between discrepancy accessibility and emotional distress. Self-discrepancy data was collected from undergraduates four to six weeks prior to the day of the study. Based on this, participants were divided into two groups according to a median split: those with larger ideal and ought self-discrepancies and those with smaller ideal and ought self-discrepancies. Those who had only one large or small self-discrepancy (i.e., either ideal *or* ought but not both) were excluded from the study. Half of the participants in each group were primed to access their ideal discrepancies, while the other half were primed to access their ought discrepancies.

Analysis of variance (ANOVA) results revealed that the ideal priming manipulation significantly increased feelings of depression pre- and post-manipulation for participants in the large discrepancy group but not for those in the small discrepancy group, and that the ought priming manipulation significantly increased feelings of anxiety for participants in the large discrepancy group but not for those in the small discrepancy group. These findings indicate that Higgins et al. (1986) were successful in manipulating the accessibility of self-discrepancies in that participants with large ideal *and* ought discrepancies who were in the ideal priming experimental condition experienced increases in depression (but not anxiety), and participants with large ideal *and* ought discrepancies who were in the ought priming experimental condition experienced increases in anxiety (but not depression). Their findings also support the idea that changes in the accessibility of self-discrepancies changes the type of emotional distress that people experience.

Applying Self-Discrepancy Theory to Social Roles

When measuring self-discrepancies, researchers often look for discrepancies in terms of attributes associated with the type of *person* (in general) one would ideally like to be or thinks one should be (e.g., Hardin & Lakin, 2009; Higgins et al., 1986; Strauman & Higgins, 1988) rather than attributes associated with a particular social role. However, a few researchers have departed from this typical pattern. For instance, Boldero and Francis (2000) examined the discrepancies that students reported between their evaluations of themselves as *students* and the kind of *students* they would ideally like to be or believed they should be. Partial correlation results supported the two primary postulates of self-discrepancy theory; students' ideal discrepancies related to being a student were uniquely related to depressive symptoms, and their ought discrepancies related to being a student were uniquely related to anxiety symptoms.

Another study, however, did not find support for self-discrepancy theory in the context of social roles. Marcussen (2006) incorporated elements of self-discrepancy theory into a sociological theory of identity to predict which types of emotional distress (depression or anxiety) are related to "aspirational" and "obligatory" discrepancies in undergraduates from the role of student, son/daughter, and friend. Overall, the predictions related to self-discrepancy theory were not supported, though there are a few reasons that may explain this. First, depression was measured with only four items from the Center of Epidemiological Studies-Depression Scale, and anxiety was measured by only four items from the General Social Survey. The author selected items from each scale based on her opinion that they had "the least amount of overlap between" (p. 8) the constructs of depression and anxiety rather

than through empirical methods. Second, self-discrepancy measurement involved participants rating the extent to which a nomothetic list of adjectives described their identities from the social role perspectives of student, son/daughter, and friend. This method is inconsistent with what several self-discrepancy researchers have argued for, in that idiographic means of self-discrepancy measurement are critical to ensure that the most salient attributes are included in self-guide assessment (e.g., Boldero et al., 2005; Hardin & Lakin, 2009; Higgins, 1987, 1999). Therefore, it may be that Marcussen's (2006) findings did not support the predictions of self-discrepancy theory because she did not use idiographic self-discrepancy methodology.

Polasky and Holahan (1998) also examined self-discrepancies in a specific social role. They assessed the discrepancies that married, full-time employed mothers reported between their evaluation of themselves as mothers and the kind of mother they wished they could be or believed they should be. Though Polasky and Holahan's focus was on interrole conflict, they found that mothers reported "moderate" ideal and ought discrepancies and both of these discrepancies were associated with both negative emotional states. However, after controlling for the variance contributions of the alternative discrepancy and emotion, ideal discrepancies were not uniquely related to depression and ought discrepancies were not uniquely related to anxiety. Although this lack of specificity in the hypothesized relationship between self-discrepancies and emotional distress does not support Higgins' (1987, 1989a) predictions (i.e., ideal discrepancies are uniquely related to depression and ought discrepancies are uniquely related to anxiety), they do support the idea that self-discrepancies can manifest in the context of a social role (i.e., mother).

That self-discrepancies can occur in the social role of mother is noteworthy, given that the vast majority of a large national probability sample of American women (n = 2,519)

viewed it as an important role (McQuillan, Greil, Shreffler, & Tichenor, 2008); indeed, the study found that even women who were not mothers assigned importance to motherhood, though mothers consistently assigned more importance to the role than did non-mothers. The study also found that the importance of motherhood remained high among employed mothers who also value work success, suggesting that having a job does not necessarily mitigate the importance of motherhood. As previously mentioned, only one study (i.e., Polasky & Holahan, 1998) to date has examined self-discrepancies from the social role perspective of mothers, and although it found that self-discrepancies were related to negative emotions, it did not find support for the relationships between self-discrepancies and emotional distress, as Higgins (1987) predicted. Additional studies that would either replicate Polasky and Holahan's (1998) findings or provide support for Higgins's (1987) predictions would allow for a better understanding of how self-discrepancies may be related to emotional distress in mothers.

The Current Studies

Some suggest that present-day mothers are faced with the unprecedented challenge of meeting impossible standards of parenting and family life; Douglas and Michaels (2004) describe it as the "new momism." Could it be that some of the stress and emotional distress mothers experience is because they negatively evaluate themselves against the standards they have for what it means to be a good mother? This idea can be explored from a self-evaluation perspective and through the lens of self-discrepancy theory (Higgins, 1987). Few studies have applied self-discrepancy theory to social roles, and mixed findings have emerged (e.g.,

Boldero & Francis, 2000; Polasky & Holahan, 1998), which indicates a need for additional research.

In an attempt to test the general predictions of self-discrepancy theory in a new population and extend the theory to a social role context, three studies were proposed. Study 1 was designed to provide baseline information about how mothers feel about themselves *as people*. This is important, as only one study has examined self-discrepancy theory from the self-as-person perspective in a population of adult mothers (e.g., Alexander & Higgins, 1993); although that study's results supported the primary predictions of self-discrepancy theory, replication of those findings is necessary, as most self-discrepancy research has been conducted with undergraduate students (e.g., Boldero & Francis, 2000; Higgins et al., 1985, 1986; Phillips & Silvia, 2005, 2010; Scott & O'Hara, 1993). Study 1 was also designed to determine if global self-discrepancies (i.e., self-as-a-person perspective) exist and whether they manifest in the manner predicted by Higgins (1987) in a sample of mothers.

Study 2 was designed to examine self-discrepancies in mothers from the social-role perspective of *mother* and involved an experimental design in which one group of mothers was primed to access their evaluations of themselves as mothers, thereby testing the relationship between self-discrepancy magnitude and emotional distress. Study 3 employed a similar experimental design (also from the social role perspective of *mother*), but ideal and ought self-discrepancy accessibility were differentially manipulated, with the goal of allowing for a closer examination of the relationships between types of self-discrepancies and types of emotional distress.

Data for all proposed studies were collected through Amazon's Mechanical Turk (MTurk). MTurk is a virtual marketplace in which an employer (requester) can post a simple

job called a *human intelligence task* (HIT), and workers from a large pool can elect to complete the HIT. For brief tasks, workers are paid small amounts of money (e.g., $0.01-$0.50) in exchange for work that requesters deem acceptable; workers are not paid for work requesters deem unacceptable. MTurk is currently being used to collect data by social science researchers.

Buhrmester, Kwang, and Gosling (2011a, 2011b) assessed MTurk's utility for social science researchers. They found MTurk workers to be more demographically diverse in terms of age, gender, and geographical location than participants from Gosling, Vazire, Srivastava, and John's (2004) large internet sample (N = 361,703)[1]. Buhrmester et al. (2011a, 2011b) also found that workers were more internally motivated than financially motivated to complete HITs and that compensation amount did not meaningfully influence the quality of the data they provided (mean Cronbach's alpha = .87 across all scales and compensation levels).

Furthermore, the reliability of data gathered from MTurk workers was as good as or better than data gathered in traditional published studies. When measures were re-administered three weeks later, the mean test-retest reliability coefficient for the MTurk sample was r = .88 compared to r = .80 for the traditional sample. These findings suggest that MTurk's diverse pool of workers can provide social science researchers with

[1] Gosling et al. (2004) gathered personality and demographic data from users of an Internet website which offers a variety of personality quizzes and tests intended for entertainment purposes. They compared their results to those reported in articles that employed more traditional, non-Internet samples and were published in *Journal of Personality and Social Psychology* in 2002. Their analyses indicate that Internet samples are comparable to traditional, non-Internet samples in terms of personality, adjustment, and race, but that Internet samples are more diverse that traditional, non-Internet samples in terms of gender, age, socioeconomic status, and geographic location. They conclude that athought Internet samples are not completely representative of the entire U.S. population, they offer psychological researchers an opportunity to incorporate more diversity into their samples without compromising data quality.

psychometrically sound data and would be a more efficient way of collecting data from mothers. Thus, given the typical difficulty and expense associated with recruiting mothers to come to a university research lab to participate in psychological research, the current studies used MTurk to recruit participants.

CHAPTER 2

STUDY 1

The purpose of Study 1 was to apply self-discrepancy theory to a new population: American mothers. The majority of self-discrepancy research has been conducted on university students (e.g., Boldero & Francis, 2000; Hardin & Lakin, 2009), which limits generalizability of findings. Only two studies have examined self-discrepancies in mothers (Alexander & Higgins, 1993; Polasky & Holahan, 1998) but not from the "self as a person" perspective. Study 1 sought to test whether the primary hypotheses of self-discrepancy theory, as described by Higgins (1987), were supported in a sample of adult mothers. Previous studies with undergraduate samples found that ideal discrepancies were uniquely associated with depression and ought discrepancies were uniquely associated with anxiety (e.g., Hardin & Lakin, 2009; Higgins et al., 1985). The same associations were expected to emerge in a sample of mothers. Hypotheses for Study 1 were:

H1: Ideal discrepancies would be positively associated with depressive symptoms when controlling for ought discrepancies and anxiety symptoms.

H2: Ought discrepancies would be positively associated with anxiety symptoms when controlling for ideal discrepancies and depressive symptoms.

Method

Participants and Procedures

Mothers living in the U.S. (n = 107) participated in this study. Participants were recruited via MTurk and were screened for eligibility in two ways. First, the HIT containing the link to the study's survey was made available to workers whose MTurk accounts indicated that they were in the U.S. and who had a 96% HIT approval rating. Higher approval ratings reflect higher caliber workers, but requiring an especially high approval rating (e.g., 98%) decreased the number of workers who could complete the HIT. Second, the HIT was designed to solicit responses only from workers who were mothers, based on the title, "Psychological Survey for MOTHERS." After electing to complete the HIT, workers first reviewed an informed consent document (see Appendix A). If they agreed to participate in the study, they then completed the self-discrepancy measure (see Appendix B). Next, participants completed the Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995; see Appendix C). The presentation of the DASS was counter-balanced with an affect measure, though the affect measure was not used in analyses relevant to Study 1 (Higgins et al., 1986; see Appendix D). Then participants completed two items designed to assess attentiveness (i.e., cross-checking reverse coded responses of certain items; see Appendix E). Finally, they completed a series of demographic items that contained additional screening criteria (see Appendix F). Including additional screening criteria (e.g., gender, zip code) has been suggested to help ensure workers are members of the study's intended sample

(Buhrmester, 2012). In addition, participants completed some measures unrelated to the current study.

Data collection was slower than expected, with a compensation rate of $0.30, so it was increased to $0.50. A total of 107 individuals completed the survey. Participants who did not provide responses to the DASS and state mood measures were dropped from analyses (n = 2). Participants who did not provide acceptable responses to demographic items were dropped (e.g., indicated sex was male, n = 1; indicated no child 18 years or younger lived in household, n = 1). Participants who did not indicate that they had a biological, step-, or adopted child aged 18 years or younger living with them were excluded from analyses (n = 3). In addition, data from participants who took longer than three standard deviations above the mean completion time (M = 15; SD = 8.74) were dropped from all analyses (n = 2). Participants who were determined to be multivariate outliers, as discussed by Tabachnick and Fiddell (2013), were dropped from all analyses (n = 1). The final sample consisted of 97 mothers who ranged in age from 20 to 56 years (M = 35.03, SD = 8.17), were mostly (83%) White (11% African American, 5% Hispanic, 1% biracial) and (73%) married (2% divorced/separated, 9% cohabitating, 16% dating). The majority (63%) of participants had earned a degree beyond a high school diploma (23% had "some college/university," 14% had graduated high school). The majority of participants were employed (38% full-time, 21% part-time, 5% unemployed, 35% stay-at-home mother), worked an average of 23.77 hours weekly (SD = 17.48, n = 94; three mothers were dropped from this analysis, as they indicated that they were "stay-at-home mothers" but worked 80+ hours weekly). The modal reported income was $51,000-$71,000. Most participants indicated that they did not have a current diagnosis of a depressive or anxiety disorder (80%) or a history of a diagnosed depressive or

anxiety disorder (66%). Participants had an average of 1.93 children (*SD* = 1.10), with an average age of 8.16 years (*SD* = 5.30).

Measures

Demographic Information

Participants completed a variety of demographic items. Demographic items relevant to the current study assessed age; ethnicity; citizenship; state of residence; education level; number, gender, and age of all people living in the household; romantic relationship status; employment status and number of hours worked per week; and annual household income (see Appendix F for specific items and response options). These items required participants to respond by selecting a stock answer from a pull-down menu or directly entering a number representing their responses.

Self-Discrepancies

Self-discrepancies were measured by combining approaches. The self-guides and instructions were explained according to the language used in the Integrated Self-Discrepancy Index (ISDI; Hardin & Lakin, 2009; see Appendix B), but the ideal and ought discrepancies were calculated according to the method described by Stevens, Holmberg, Lovejoy, and Pittman (2014). Hardin and Lakin (2009) found the ISDI to be a valid measure of self-discrepancies because their results supported the predictions of self-discrepancy theory (i.e.,

ideal-discrepancies uniquely predict depression and ought-discrepancies uniquely predict anxiety; Higgins, 1987). Furthermore, they found a weaker correlation between ideal and ought discrepancies (r = .32) than what has been reported in studies that used alternative methods (e.g., .77 in Phillips & Silvia, 2010; .48 in Strauman & Higgins, 1988) and consequently suggest that the ISDI may have a greater ability to distinguish between the two types of discrepancies than other self-discrepancy instruments. In the ISDI, the ought self is referred to as the "should self." The current study retained Hardin and Lakin's (2009) "should self" terminology in the survey.

To assess self-discrepancies from the "self as a person" perspective, participants were first provided with a definition of the ideal and ought selves. The ideal self was defined as "Traits that you would ideally like to possess; the type of person you wish, desire, or hope to be." The ought self was defined as "Traits that you think you ought to possess; the type of person you have a duty, obligation, or responsibility to be; the traits you are morally obligated to possess." A comprehension check assessed participants' understanding of the distinction between the two selves. Participants completed one sentence for each type of self by selecting the best of three response options. The comprehension check item for the ideal self was, "*The ideal self is: Unattainable and perfect; What I want, dream, or desire to be: My normal, usual self.*" The comprehension check item for the ought self was, "*The should self refers to: What I am now; What others want me to be: My moral obligation.*" Participants were provided with feedback on their answers to the comprehension questions such that, in the event an incorrect response was provided, participants had an opportunity to clarify their understanding of the construct. Next, participants were asked to write five attributes that described, first, their ideal selves and then rate on a 7-point scale (1 = *not at all; 4 = medium;*

7 = extremely; Stevens et al., 2014) how much they wish they could be like that trait. After that, participants were asked to write five attributes that described their ought selves and then rate the same 7-point scale how much they think they should be like that trait. Although the ISDI provides a nomothetic list of 100 adjectives that may be used to modify their lists to assists participants who may have limited verbal abilities, this nomothetic part of the ISDI was not be used because proficient verbal ability was assumed, given that participants were recruited from a crowdsourcing website on which the ability to read and reason are necessary to complete HITs. Not including the nomothetic component of the ISDI makes the measure similar to the measure used by Shah et al. (1998).

In addition to the ideal and ought selves, Stevens et al. (2014) also specifically assessed the actual self by having participants rate on the same 7-point scale the extent to which they were actually like each of the traits in their ideal-self and ought-self lists. This procedure was included in the current study's self-discrepancy assessment. Ideal discrepancies were calculated by subtracting the participants' ratings of the degree to which they actually possessed an ideal attribute (i.e., actual self) from the degree to which they wished to be like that particular attribute (i.e., ideal self). The ideal self-discrepancy score is the mean of these difference scores. Similarly, ought discrepancies were calculated by subtracting the participants' ratings of the degree to which they actually possessed an ought attribute (i.e., actual self) from the degree to which they thought they should be like that particular attribute (i.e., ought self). The ought self-discrepancy score is the mean of these difference scores. Higher means indicate larger self-discrepancies.

Depression and Anxiety

The Depression Anxiety Stress Scales (Lovibond & Lovibond, 1995; see Appendix E) comprise a self-report instrument of three scales (Depression, Anxiety, Stress) for which participants rate how frequently they have experienced the items in the past week. The DASS is a measure of states of depression, anxiety, and stress rather than traits. Each scale has 14 items and is divided into subscales. Only the Depression and the Anxiety scales were utilized for purposes of this study. The Depression scale consists of items representing dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. Example items from the Depression scale include *"I felt that I had lost interest in just about everything," "I felt sad and depressed,"* and *"I felt that I had nothing to look forward to."* The Anxiety scale consists of items representing autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. Example items from the Anxiety scale include *"I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures or physical exertion," "I was worried about situations in which I might panic and make a fool of myself,"* and *"I felt terrified."* Items referring to British English nouns (e.g., lifts) were substituted with its American English counterpart (e.g., elevators). Participants rated on a 4-point scale the frequency or degree to which they experienced the item during the past seven days (0 = *did not apply to me at all*; 3 = *applied to me very much, or most of the time*). The DASS is scored by summing scores for each scale; higher scores indicate greater degrees of depression or anxiety.

The Depression and Anxiety scales of the DASS have sound psychometric properties. The scales were constructed through the use of multiple group factor analysis and have

demonstrated good internal consistency based on a large, normal sample (α = .91 and .81 for Depression and Anxiety scales, respectively; Lovibond & Lovibond, 1995). In the current study, the DASS Depression and Anxiety scales demonstrated acceptable Cronbach's alphas of .94 and .92, respectively. This suggests that the measure worked as expected in this sample of mothers. In previous research (e.g., Lovibond & Lovibond, 1995), the two scales have been moderately correlated with each other (Depression-Anxiety, r = .42). Factor analysis revealed that depression and anxiety items distinctly loaded onto their respective factors. Correlations between the scales of the DASS and the BDI and the Beck Anxiety Inventory (BAI) from an undergraduate sample suggest it is a valid measure (DASS Depression-BDI, r = .74; DASS Depression-BAI, r = .54; DASS Anxiety-BDI, r = .58; DASS Anxiety-BAI, r = .81). This indicates that the DASS is generally consistent with the Beck scales; additionally, the cross-construct validity of the DASS Depression scale-BAI and DASS Anxiety-BDI suggest better convergent validity than other self-report measures.

Results

Preliminary Analyses

Before primary regressions were run, preliminary analyses were conducted to survey the data. First, the data were examined and corrected for univariate outliers using the procedure described by Tabachnick and Fiddell (2013) in which z-scores were created for variables of interest and in which z-score values < 3.29 are considered outliers. To correct for outliers, the corresponding original variable values were changed to the next highest non-

outlier value. Only one univariate outlier was detected on the Anxiety variable. Second, dependent variable normality was assessed. The DASS Depression and Anxiety score distributions were both positively skewed and kurtotic, suggesting non-normality. In addition, histograms and significant Shapiro-Wilk statistics for DASS Depression and Anxiety score distributions ($W = .87$, $p < .001$; $W = .81$, $p < .001$, respectively) indicated non-normality. As a result, the dependent variables were transformed using the procedures recommended by Tabachnick and Fidell (2013). Square-root transformations produced the most improvements overall, though the Shapiro-Wilk statistics for DASS Depression and Anxiety scores remained significant ($W = .96$, $p = .005$; $W = .95$, $p < .001$, respectively), indicating that the distributions, though improved, remained non-normal.

Descriptive analyses were conducted to assess the means and standard deviations (see Table 1).

Table 1

Study 1 Means, Standard Deviations, and Bivariate Correlations Among Primary Variables

Variable[a]	*M*	*SD*	Range	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1. Maternal age in years	35.05	8.17	20-56	1.00							
2. Number of children	1.93	1.10	1-5	.29**	1.00						
3. Depression	2.35	1.50	0-5.63	-.18^{+}	-.17^{+}	1.00					
4. Anxiety	1.99	1.44	0-5.29	-.21*	-.26*	.73**	1.00				
5. Hours worked/wk	23.77	17.48	1-61	.08	.13	-.20*	-.10	1.00			
6. Income	4.66	1.81	--	.12	.16	-.24*	-.19^{+}	.29**	1.00		
7. Ideal self-discrepancy	2.50	1.41	-1.20-5.20	.13	.14	.19^{+}	.10	-.05	-.14	1.00	
8. Ought self-discrepancy	1.47	1.03	-0.40-4.80	-.16	.02	.32**	.19^{+}	-.08	-.08	.27**	1.00

Note. Depression and Anxiety scores reflect square root transformations of DASS Depression and Anxiety scores.
[a]n = 97, except for analyses including Hours worked/wk, which has n = 94.
$^{+}$ $p < .10$, * $p < .05$, ** $p < .01$.

Two participants who indicated that they were stay-at-home mothers who worked 80 or more hours per week were excluded from all descriptive analyses concerning this variable. The mean ideal discrepancy score was higher than the mean ought discrepancy score, but both were relatively small. The magnitudes of self-discrepancies reported in the literature vary from general congruence to the actual self to moderate (e.g., Boldero & Francis, 2000; Hardin & Lakin, 1998; Polasky & Holahan, 1998), so no specific size estimates regarding the size of self-discrepancies were expected. Participants' mean DASS Depression and Anxiety scores indicated, in general, that participants were not exhibiting clinically meaningful levels of symptoms. Specifically, the percent of participants who reported severe or extremely severe symptoms of depression (8%) were approximately what would be expected from a community sample, but the percentage of those who reported the same degree of anxiety symptoms (13%) was slightly higher than what would be expected from a community sample.

Pearson bivariate correlations and a factorial multiple analysis of variance (MANOVA) were conducted to identify control variables for the primary regressions (see Tables 1 and 2).

Table 2

Study 1 Factorial MANOVA Results for Primary Categorical Variables' Relationship to Depression and Anxiety

Effect	Wilk's Lambda	F	Hypothesis df	Error df
Intercept	0.47***	44.35	2	77
Relationship Status	0.96	1.73	2	77
Employment	0.99	0.29	2	77
Education	0.98	0.46	4	154
Race	1.00	0.21	2	77
Relationship Status x Employment	0.96	0.84	2	77
Relationship Status x Education	0.96	1.53	4	154
Relationship Status x Race	0.97	1.09	2	77
Employment x Education	0.96	0.77	4	154
Employment x Race	0.97	1.35	2	77
Education x Race	1.00	0.21	2	77
Relationship Status x Employment x Education	0.95	2.23	2	77
Relationship Status x Employment x Race	1.00	--	0	77.5
Relationship Status x Education x Race	1.00	--	0	77.5
Employment x Education x Race	1.00	0.20	2	77
Relationship Status x Employment x Education x Race	1.00	--	0	77.5

* $p < .05$, ** $p < .01$, *** $p < .001$.

Pearson bivariate correlation results indicated that ideal discrepancies were positively correlated with ought discrepancies, though the correlation was slightly weaker than that reported by Hardin and Lakin (1998). DASS Depression scores were positively correlated with DASS Anxiety scores. Ideal discrepancies were positively correlated with DASS Depression scores at a trend level ($p = .06$), and ought discrepancies were positively correlated with DASS Anxiety scores at a trend level ($p = .07$); that these correlations were only significant at a trend-level significance was unexpected. Ought discrepancies were also positively correlated with DASS Depression scores, which was again unexpected. Hours worked each week and income (a categorical variable coded such that higher values represented higher income) were both negatively correlated to DASS Depression scores, and maternal age and number of children were both negatively correlated with DASS Anxiety scores.

Categorical demographic variables were collapsed. Romantic relationship status was collapsed into two groups: (1) those who were cohabitating or married, and (2) those who were single, dating, or divorced groups. Ethnicity was collapsed into non-White and White groups. Education was collapsed into three groups: (1) those with a high school diploma or less, (2) those with "some college" or a 2-year degree, and (3) those with a bachelor's degree or beyond. Employment status was collapsed into employed and unemployed groups. Factorial MANOVA results yielded nonsignificant findings for romantic relationship status, employment status, ethnicity, and education level as they related to the dependent variables (see Table 2). As such, demographic control variables for the primary regressions were as follows: hours worked each week, income, maternal age, and number of children. As

previously mentioned, two participants were dropped due to inappropriate responses on the hours worked per week variable; given this, the sample size for the primary analyses is 95.

Primary Analyses

Hierarchical multiple regression was used to determine a discrepancy's ability to uniquely predict negative emotion (Hypotheses 1 and 2). In all analyses, the alternate discrepancy score and emotional outcome, and significantly correlated demographic variables were controlled. Specifically, to test if ideal discrepancies uniquely predict depression from the "self as a person" perspective (Hypothesis 1), ought discrepancy, anxiety, maternal age, number of children, hours worked each week, and income were entered in Step 1 of the hierarchical regression model, and ideal discrepancy was entered in Step 2. The hypothesis was not supported, as the change in R^2 in Step 2 was not statistically different from zero (see Table 3). Similarly, to test if ought discrepancies uniquely predict anxiety from the "self as a person" perspective (Hypothesis 2), ideal discrepancy, depression, maternal age, number of children, hours worked each week, and income were entered in Step 1 of the hierarchical regression model, and ought discrepancy was entered in Step 2. The hypothesis was not supported, as the change in R^2 in Step 2 was not statistically different from zero (see Table 4).

Table 3

Study 1 Hierarchical Multiple Regression Analyses Predicting Depression from Ideal Self-Discrepancy Scores

			Unstandardized Coefficients		Standardized Coefficients
Predictor	ΔR^2	*F*	*B*	Std. Error	β
Step 1	0.58***	20.55***			--
Constant			0.98	0.62	
Hours worked/wk			-0.01	0.01	-0.10
Income			-0.06	0.06	-0.07
Maternal age			0.00	0.01	0.00
Number of children			0.03	0.10	0.02
Anxiety			0.70	0.08	0.68***
Ought SD			0.26	0.11	0.17
Step 2	0.00	0.79			
Ideal SD			0.07	0.08	0.07
Total R^2	0.59				
Total F	17.69***				

Note. SD = Self-discrepancy.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4

Study 1 Hierarchical Multiple Regression Analyses Predicting Anxiety from Ought Self-Discrepancy Scores

			Unstandardized Coefficients		Standardized Coefficients
Predictor	ΔR^2	ΔF	*B*	Std. Error	β
Step 1	0.55***	18.20***			
Constant			0.99	0.60	--
Hours worked/wk			0.01	0.01	0.08
Income			-0.02	0.06	-0.02
Maternal age			-0.01	0.01	-0.05
Number of children			-0.16	0.10	-0.12
Depression			0.68	0.07	0.71***
Ideal SD			-0.01	0.08	-0.01
Step 2	0.00	0.33			
Ought SD			-0.06	0.11	-0.05
Total R^2	0.56				
Total F	15.53***				

Note. SD = Self-discrepancy.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

Self-discrepancy theory posits that differences between individuals' actual selves and their ideal selves are associated with depression, and differences between individuals' actual selves and their ought selves are associated with anxiety. The purpose of this study was to test the predictions of self-discrepancy theory to a sample of American mothers, who were asked to evaluate themselves from the "self as a person" perspective. No direct support for the theory was found. Only trend-level positive correlations were observed regarding the

predicted relationships between self-discrepancies and their respective emotional outcomes (i.e., depression or anxiety). The only relationship achieving statistical significance was the positive correlation between ought discrepancies and depression, which is not what self-discrepancy theory would have predicted. When the more conservative approach had been taken using hierarchical multiple regression analyses, with controls for the opposite discrepancy and emotion, the trend level findings disappeared. As such, this study did not yield support for self-discrepancy theory in a sample of mothers.

A variety of explanations for the current study's null findings should be considered, such as problems with measurement, design, and theory (Cronbach & Meehl, 1955). Regarding measurement, it is possible that the self-discrepancy measure, which combined the instructions of the ISDI (Hardin & Lakin, 2009) with the calculation procedures of Stevens et al. (2014), was flawed in some way. The ISDI instructions and comprehension check items were retained, as it was believed that they would provide participants with a more specific understanding of the nuances of ideal and ought discrepancies; however, it may be the case that such elaborate instructions were too lengthy for online data collection or placed too great a burden on participants, who may have fatigued early in the survey. Conducting a pilot study to evaluate the quality of the instructions in an online context may have addressed this.

In terms of design, a larger sample size would likely have rendered the trend-level correlations, which generally supported the predictions of self-discrepancy theory, statistically significant. In addition, the current study recruited a sample of mothers via an online crowdsourcing website, which was a departure from the undergraduate, lab-setting samples typically used in self-discrepancy research. However, as varying degrees of support for self-discrepancy theory has been observed in mothers (e.g., Alexander & Higgins, 1993; Polasky

& Holahan, 1998), it is unclear as to why the online nature of the study should have resulted in null findings, especially as MTurk has been shown to yield psychometrically sound data (e.g., Buhrmester et al., 2011a, 2011b).

Finally, the merits of self-discrepancy theory have been questioned, as some researchers (e.g., Ozgul et al., 2003; Phillips & Silvia, 2005; Tangney et al., 1998) have found that self-discrepancies are related to negative emotional outcomes in general, rather than in the unique ways that the theory posits. For instance, Rodebaugh and Donahue (2007) found that ought discrepancies had, at best, the same ability as ideal discrepancies to predict anxiety when self-discrepancies were measured with the Selves Questionnaire. They found more support for the unique relationship between ought discrepancies and anxiety when self-discrepancies were measured with a modified version of the Selves Questionnaire, though far stronger support was observed for the relationship between ideal discrepancies and depression. Ozgul et al. (2003) found that ideal discrepancies *and* ought discrepancies were related to depression when the Selves Questionnaire was used. Tangney et al. (1998) found that ought discrepancies, and not ideal discrepancies, were related to dejection in an undergraduate sample. The current study's findings appear to add support to the inconsistencies that are found in the self-discrepancy theory literature, as only the ought discrepancy was significantly correlated to depression.

Ultimately, the current study applied a new self-discrepancy methodology (i.e., procedural combination of the ISDI and Stevens et al. [2014]) to a new sample (i.e., mothers) with new recruitment procedures (i.e., MTurk). Given these potentially confounding influences, it is difficult to ascertain an adequate explanation for the given findings. Future research should involve pilot-testing self-discrepancy instruments online or recruit a sample

of mothers for participation in a lab setting to serve as a comparison. Other considerations would be to simply employ one measurement method (e.g., either the ISDI or that of Stevens et al.). Nevertheless, given that support for self-discrepancy theory has been observed in samples of mothers, as previously discussed, continued research on this topic is warranted in efforts to replicate findings, be they null or significant.

CHAPTER 3

STUDY 2

The purpose of Study 2 was twofold. First, this study tested self-discrepancy theory in a social role. As previously discussed, the mothers in Polasky and Holahan's (1998) sample reported ideal and ought discrepancies from the "self as a mother" perspective, but those discrepancies did not predict emotional distress in the way that Higgins (1987) suggested, though they did predict emotional distress generally. However, some support has been found for self-discrepancy theory in the context of a social role. Boldero and Francis (2000) found that discrepancies reported by undergraduates from the "self as a student" perspective *did* predict negative emotion in the way Higgins (1987) suggested (i.e., ideal discrepancies were uniquely related to depression and ought discrepancies were uniquely related to anxiety). Second, this study tested accessibility (i.e., access to motherhood-related thoughts) as a moderator of the relationship between self-discrepancies and emotional distress by experimentally manipulating accessibility to thoughts related to motherhood. The manipulation intended to influence state levels of emotion, so symptoms of depression and anxiety were conceptualized as in-the-moment experiences of dejection- and agitation-related emotions, respectively, rather than the degrees to which symptoms have manifested over the past week. As such, the following hypotheses were offered with these two intentions in mind:

H1: Ideal discrepancies from the "self as a mother" perspective would be positively associated with dejection-related emotions while controlling for ought discrepancies and agitation-related emotions.

H2: Ought discrepancies from the "self as a mother" perspective would be positively associated with agitation-related emotions while controlling for ideal discrepancies and dejection-related emotions.

H3a: The strength of the relationship between ideal discrepancies and dejection-related emotions would be moderated by motherhood accessibility, such that the relationship would be more positive for those in the experimental condition than in the control condition.

H3b: The strength of the relationship between ought discrepancies and agitation-related emotions would be moderated by motherhood accessibility, such that the relationship would be more positive for those in the experimental condition than in the control condition.

Method

Participants and Procedures

Mothers living in the United States (n = 108) participated in this study. Participants were recruited via MTurk and screened according to the procedures described for Study 1. After reading an informed consent document and agreeing to participate in the study, participants were randomly routed to take a survey for either the control condition or the

experimental condition, such that participants would be evenly distributed between the two conditions. The order of measures in the survey for each condition was the same: self-discrepancy measure, manipulation, depression and anxiety measure, affect measure, demographic items, and additional measures unrelated to this study. Presentation of the depression and anxiety measure and affect measure was counter balanced, although only the affect measure was used in this study's analyses.

Participants who were routed into the experimental condition were asked to write a brief description of their last interaction with their child. Specifically, they were instructed, "*In the space provided, please write about the last interaction you had with your oldest/only child. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and your child were feeling* " (see Appendix G). This priming activity was designed to improve accessibility to motherhood-related thoughts. Participants who were routed into the control condition were asked to write a brief description of their last interaction with a store check-out clerk. Specifically, they were instructed, "*In the space provided, please write about the last interaction you had with a store check-out clerk. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions may have been involved*" (see Appendix G). This activity was designed to be a neutral analogue to the priming activity in the experimental condition. All participants were paid $0.50 for completing the survey. A total of 108 participants completed the survey. Participants who did not provide acceptable responses to demographic items were dropped from analyses (e.g., indicated sex was male, $n = 2$; did not indicate children lived in the home, $n = 5$). Participants who failed the attention-check items were also

dropped from analyses (n = 2). In addition, data from participants who took longer than three standard deviations above the mean completion time (M = 17.53; SD = 11.66) were dropped from all analyses (n = 2).

The final sample consisted of 97 mothers (control condition n = 49; experimental condition n = 48) who ranged in age from 18 to 58 years, were mostly (77%) White (5% African American, 9% Hispanic, 3% Asian, 4% biracial, 1% American Indian/Alaska Native), and (68%) married (16% cohabitating, 5% divorced/separated, 10% dating/single). The majority of participants (58%) had earned at least an associate's degree, (22% had "some college/university," and 20% had graduated high school, but had not pursued higher education). The majority of participants were employed (35% full-time employees, 23% part-time employees, 39% stay-at-home mothers, 3% unemployed). The modal reported household income was $51,000-$70,000. Most participants indicated that they did not have a current diagnosis of a depressive or anxiety disorder (76%) or a history of a diagnosed depressive or anxiety disorder (60%). Participants had an average of 1.84 children (SD = 1.12) with an average age of 7.95 years (SD = 5.16).

Measures

Participants in both the experimental and control conditions completed the same demographic, self-discrepancy, and depression and anxiety measures as described in Study 1, with one important difference. Because Study 2 was measuring self-discrepancies from the social role perspective of *mother*, the wording of the self-discrepancy measure was revised to reflect as much. Specifically, the ideal self was defined as "Traits that, as a mother, you

would ideally like to possess; the type of mother you wish, desire, or hope to be." The ought self was defined as "Traits that you think as a mother you ought to possess; the type of mother you have a duty, obligation, or responsibility to be; the traits you are morally obligated to possess as a mother" (Please see the second portion of Appendix B for the revised measures reflecting these wording changes). In addition, although both the DASS and the affect measure were collected, DASS scores were not used in this study as it addressed only participants' current mood states.

Affect

Early self-discrepancy research conceptualized the depressive symptoms related to ideal discrepancies as dejection-related emotions (e.g., disappointed, sad) and anxiety symptoms related to ought discrepancies as agitation-related emotions (e.g., tension, nervousness; Higgins et al., 1986). In the current study, participants' state dejection and agitation were the dependent variables and were measured by the emotion words name explicitly in the two studies by Higgins et al. (1986). Specifically, dejection was assessed by a measure composed of the following emotions: sad, disappointed, blue, discouraged, low, happy (reverse coded), enthusiastic (reverse coded), and satisfied (reverse coded). Agitation was assessed by a measure composed of the following emotions: quiet, afraid, agitated, desperate, tense, nervous, and calm (reverse coded). Participants were asked to rate the extent to which they currently (i.e., in the moment) experienced each of the emotions on a 6-point scale (0 = *not at all*, 5 = *a great deal*). The mean of the eight dejection items was the dejection scale score, and the mean of the seven agitation items was the agitation scale score.

Higher scores reflect greater emotional intensity. In this study, the Agitation and Dejection scales demonstrated acceptable internal consistency (α = .82 and .88, respectively).

Results

Preliminary Analyses

Before primary regressions were run, preliminary analyses were conducted to survey the data. First, two univariate outliers were detected (one on the agitation variable, one on the dejection variable) and corrected using the procedure described for Study 1. Then, dependent variable normality was assessed. Their score distributions were both positively skewed and kurtotic, suggesting non-normality. In addition, histograms and significant Shapiro-Wilk statistics for agitation and dejection score distributions (W = .80, p < .001; W = .85, p < .001, respectively) indicated non-normality. As a result the dependent variables were transformed using the procedures recommended by Tabachnick and Fidell (2013). Natural log transformations produced the most improvements overall, though the Shapiro-Wilk statistics for agitation and dejection remained significant (W = .95, p = .001; W = .96, p = .003, respectively), indicating that the distributions, though improved, remained non-normal.

Next, descriptive analyses were conducted, followed by independent samples *t*-tests (see Table 5), to determine if control condition means were significantly different from experimental condition means. It should be noted that seven participants, who indicated they were stay-at-home mothers, reported that they worked 80 or more hours per week. These participants were excluded from all descriptive analyses concerning this variable. Condition

Table 5

Study 2 Descriptive Statistics and Independent Samples *T*-Test Comparing Control and Experimental Condition Means

	Total Sample		Control Condition[a]		Experimental condition[b]		
Variable	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	*T*-Value
Maternal age in years	34.13	7.88	33.35	8.44	34.94	7.27	-0.99
Number of children	1.84	1.12	1.94	1.23	1.73	1.01	0.92
Hours worked/wk	22.99	18.19	23.53	19.16	22.49	17.46	1.49
Income	4.44	2.07	4.53	2.29	4.35	1.84	0.42
Ideal SD	1.84	1.25	1.55	1.01	2.14	1.40	-2.39*
Ought SD	1.09	1.07	1.06	1.06	1.12	1.09	-0.29
Agitation	0.65	0.34	0.68	0.31	0.62	0.36	0.88
Dejection	0.75	0.37	0.75	0.33	0.76	0.40	-0.18

Note. Self-discrepancy is abbreviated as SD. Income is a categorical variable that was coded on a 1-9 scale; 1 = < $15,000; 4 = $31,000-$50,000; 5 = $51,000-$70,000; 9 = /> $151,000. Agitation and Dejection reflect natural log transformations.

[a]$n = 49$; [b]$n = 48$.

* $p < .05$, ** $p < .01$.

means significantly differed only for ideal discrepancy scores, where the discrepancy was larger for those in the experimental condition. The manipulation appears to have been unsuccessful, as there were no significant between-condition differences in Dejection and Agitation.

Pearson bivariate correlations, chi-square analyses, and a factorial MANOVA were conducted to identify relationships among key variables and demographic control variables for the primary regressions. Pearson bivariate correlation results (see Table 6) indicated that ideal discrepancies were positively correlated with ought discrepancies to a greater extent than what was observed in Study 1. In addition, agitation was positively correlated with dejection. Ideal discrepancies were positively correlated with both agitation and dejection, though the correlation to agitation was unexpected. Ought discrepancies were also positively correlated with both agitation and dejection, though the correlation to dejection was unexpected. Pearson bivariate correlation results indicated no demographic variables (e.g., hours worked each week, income, number of children, maternal age) were significantly related to the dependent variables. Categorical demographic variables were collapsed into the same groupings as described in Study 1. Nonsignificant chi-square analyses indicated no differences between experimental conditions among the categorical demographic variables (e.g., romantic relationship status, education, employment status, ethnicity; see Table 7).

Table 6

Study 2 Bivariate Correlations among Primary Variables (N =97)

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1. Maternal age	1.00							
2. Number of children	.01	1.00						
3. Agitation	-.03	.07	1.00					
4. Dejection	.03	.09	.76***	1.00				
5. Hours worked/wk	.00	.09	.08	-.10	1.00			
6. Income	.23*	-.01	-.16	-.17^{+}	.01	1.00		
7. Ideal self-discrepancy	-.03	-.02	.23*	.37***	-.13	-.02	1.00	
8. Ought self-discrepancy	-.06	.07	.24*	.26*	.06	.00	.56***	1.00

Note. Agitation and Dejection values reflect natural log transformations.
$^{+}p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 7

Study 2 Chi-Square Analyses Between Categorical Demographic Variables and Experimental Condition Assignment

	Pearson χ^2 value	df
Romantic relationship status x Experimental condition	0.08	1
Education x Experimental condition	1.24	2
Employment x Experimental condition	0.89	1
Ethnicity x Experimental condition	1.05	1

* $p < .05$, ** $p < .01$.

Regarding the relationship between categorical demographic variables and the dependent variables, factorial MANOVA results yielded significant findings only for romantic relationship status (see Table 8). Pairwise comparisons revealed that participants in the single/dating/divorced group had significantly different dejection and agitation means (M = 0.98, standard error = 0.10; M = 0.90, standard error = 0.09, respectively) than those in the married/cohabiting group (M = 0.66, standard error = 0.05; M = 0.56, standard error = 0.05, respectively). As such, romantic relationship status was the only demographic variable that needed to be controlled in the primary regressions.

Table 8

Study 2 Factorial MANOVA Results for Primary Categorical Variables' Relationship to Dejection and Agitation

Effect	Wilk's Lambda	F	Hypothesis df	Error df
Intercept	0.26***	103.39	2	74
Relationship Status	0.91*	3.87	2	74
Employment	0.95	1.97	2	74
Education	0.92	1.57	4	148
Race	0.99	0.56	2	74
Relationship Status x Employment	1.00	0.23	2	74
Relationship Status x Education	0.94	1.23	4	148
Relationship Status x Race	1.00	0.20	2	74
Employment x Education	0.98	0.44	4	148
Employment x Race	0.98	0.64	2	74
Education x Race	0.92	1.69	4	148
Relationship Status x Employment x Education	0.83	3.58	4	148
Relationship Status x Employment x Race	0.97	--	4	74.5
Relationship Status x Education x Race	1.00	1.35	2	74
Employment x Education x Race	0.98	0.42	4	148
Relationship Status x Employment x Education x Race	1.00	--	0	74.5

* $p < .05$, ** $p < .01$, *** $p < .001$.

Primary Analyses

Hierarchical multiple regression was used to determine a discrepancy's ability to uniquely predict either dejection or agitation scale scores (i.e., Hypotheses 1 and 2). In all analyses, the alternate discrepancy score and emotional outcome were controlled. To test if

ideal discrepancies uniquely predicted dejection-related emotions from the "self as a mother" perspective, ought discrepancy and agitation were entered in Step 1 of the hierarchical regression model, and ideal discrepancy was entered in Step 2. The change in R^2 was statistically different from zero, indicating that Hypothesis 1 was supported (see Step 2 on Table 9). Similarly, to test if ought discrepancies uniquely predicted agitation-related emotions from the "self as a mother" perspective, ideal discrepancy and dejection were entered in Step 1 of the hierarchical regression model, and ought discrepancy was entered in Step 2. The change in R^2 was not significant, indicating that Hypothesis 2 was not supported (see Step 2 on Table 10).

Table 9

Study 2 Hierarchical Multiple Regression Analyses Predicting Dejection from Ideal Self-Discrepancies

			Unstandardized Coefficients		Standardized Coefficients
Predictor	ΔR^2	ΔF	*B*	Std. Error	β
Step 1	0.59***	44.58***			
Constant			0.21*	0.09	--
Romantic Relationship Status			-0.01	0.07	-0.01
Agitation			0.81***	0.08	0.75
Ought SD			0.02	0.02	0.06
Step 2	0.04**	9.66**			
Ideal SD			0.07**	0.02	0.25
Step3	0.00	0.09			
Manipulation			0.02	0.05	0.02
Step 4	0.00	0.49			
Manipulation x Ideal SD			-0.03	0.04	-0.12
Total R^2	0.63				
Total F	25.69***				

Note. Self-discrepancy is abbreviated as SD. Romantic relationship status groups were coded as 0 = single/dating/divorced and 1= married/cohabitating.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 10

Study 2 Hierarchical Multiple Regression Analyses Predicting Agitation from Ought Self-Discrepancies

			Unstandardized Coefficients		Standardized Coefficients
Predictor	ΔR^2	ΔF	*B*	Std. Error	β
Step 1	0.61***	47.61***			
Constant			0.27*	0.09	--
Romantic Relationship Status			-0.13^{+}	0.07	-0.14
Dejection			0.72***	0.07	0.77
Ideal SD			-0.03	0.02	-0.10
Step 2	0.01	2.66			
Ought SD			0.04	0.03	0.13
Step 3	0.01	1.01			
Manipulation			-0.05	0.05	-0.07
Step 4	0.01	1.95			
Manipulation xOught SD			-0.06	0.04	-0.16
Total R^2	0.63				
Total F	25.44***				

Note. Self-discrepancy is abbreviated as SD. Romantic relationship status groups were coded as 0 = single/dating/divorced and 1= married/cohabitating.
* $p < .05$, ** $p < .01$, *** $p < .001$, $^{+}$trend-level significance.

Hierarchical multiple regressions were used to determine if the experimental manipulation influenced the relationship between ideal discrepancies and dejection, as well as ought self-discrepancies and agitation, respectively (i.e., Hypotheses 3a and 3b). First, interaction terms were created by multiplying centered discrepancy variables by a dummy variable, indicating experimental condition (0 = control, 1 = manipulation). One dummy variable was created for ideal discrepancies, and one was created for ought discrepancies.

Step 1 of the hierarchical regression model included the self-discrepancy and the emotional outcome being controlled. Step 2 included the self-discrepancy being tested. Step 3 added the condition variable. Step 4 included the interaction variable that corresponded with the discrepancy entered in Step 2. The change in R^2 in the final step of the regression testing the relationship between ideal discrepancies and dejection was not significant (see Step 4 on Table 9), indicating that Hypothesis 3a was not supported. The change in R^2 in the final step of the regression testing the relationship between ought discrepancies and agitation was not significant (see Step 4 on Table 10), indicating that Hypothesis 3b was not supported.

Discussion

The first objective of Study 2 was to examine self-discrepancy theory from a social role perspective, specifically from that of mother. Partial support for self-discrepancy theory from the perspective of that social role was found in that ideal discrepancies were observed to significantly predict state feelings of dejection. This finding is robust, as it was observed while controlling for ought discrepancies and agitation, and aligns with other studies that found ideal discrepancies uniquely predicted dejection-related emotions (e.g., Boldero & Francis, 2000; Hardin & Lakin, 2009; Higgins et al., 1985; Scott & O'Hara, 1993; Stevens et al., 2014; Strauman, 1989; Strauman et al., 1991). For instance, Hardin and Lakin (2009) found that ideal discrepancies uniquely predicted dejection-related emotions, which were assessed one week later.

Although support for the relationship between ideal discrepancies and dejection was found, the relationship between ought discrepancies and agitation, although significant at the

bivariate level, was not significant in the hierarchical regressions. This pattern has been observed in previous studies (e.g., Bruch, Rivet, & Laurenti, 2000; Fairbrother & Moretti, 1998; McDaniel & Grice, 2008; Rodebaugh & Donahue, 2007; Stevens et al., 2014). For instance, Bruch et al. (2000) found that ideal discrepancies were related to depressive affect, but ought discrepancies were not related to anxious affect. Support for self-discrepancy theory, when assessed from a social role perspective, has also been mixed. For example, Boldero and Francis (2000) found full support for the unique relationships between ideal discrepancies and dejection and between ought discrepancies and agitation. However, the only study to date that has examined self-discrepancy theory from the social role perspective of mother found that although ideal discrepancies were positively correlated with depression and ought discrepancies were positively correlated with anxiety, no significant relationships emerged after controlling for the effects of the alternate discrepancy and negative emotion (Polasky & Holahan, 1998).

It bears noting that, though only partial support was found for the ability of self-discrepancies to predict negative emotion, self-discrepancies were correlated with negative emotion in general. Results from bivariate correlations revealed positive correlations between ideal discrepancies and both dejection and agitation, as well as between ought discrepancies and both agitation and dejection. Other studies have found support for the relationship between self-discrepancies and negative emotions, even when support for the unique relationships between specific self-discrepancies and specific negative emotions were not found (e.g., Key, Mannella, Thomas, & Gilroy , 2000; Ozgul et al., 2003; Phillips & Silvia, 2005; Tangney et al., 1998), acknowledging the possibility that self-discrepancies may be only generally related to negative emotions.

The second objective of Study 2 was to determine if manipulating the accessibility of motherhood-related thoughts would moderate the relationship between self-discrepancies and negative emotions, such that improved accessibility would strengthen the relationship between self-discrepancies and negative emotions. However, it was first important to determine if the manipulation was effective. Hierarchical multiple regression analyses indicated that the manipulation had no influence on the strength of the relationship between self-discrepancies and negative emotion, suggesting that the manipulation was ineffective. It is possible that writing about mothers' most recent interactions with their oldest/only child lacked the potency to activate the social role self-discrepancies of mother. Though participants were requested to provide as many details as possible about the interaction, even detailed descriptions of interactions may not have been vivid enough to activate self-discrepancies. Visual inspection of participant responses suggested that some provided adequate details, though others reported primarily facts about the interaction (e.g., "I took my daughter to school this morning. We didn't talk much, she asked a question about getting contacts."). Participants wrote about a variety of interactions, such as benign outings to a store, after school reunions, disciplinary actions, morning routines. This variability in the degree of details provided, as well as the type of interactions, may have contributed to the manipulation's ineffectiveness. As such, further attempts at developing an effective manipulation of accessing the role of mother are needed.

Other studies have manipulated the accessibility of self-discrepancies in several ways with varying results. For instance, Phillips and Silvia (2005) predicted that manipulating participants' self-awareness would moderate the relationship between self-discrepancies and negative emotions, such that greater self-awareness would result in larger self-discrepancies

and more emotional distress. They manipulated self-focused attention by having some participants complete the study's measures while sitting in front of a large mirror. Results indicated that, for the low self-awareness condition, self-discrepancies were unrelated to emotion, but for the high self-awareness condition, self-discrepancies were related to negative emotion in general rather than in the manner predicted by self-discrepancy theory.

Another study tested whether testing location influenced the relationship between self-discrepancies and negative emotion (Boldero & Francis, 2000). Researchers asked some participants to complete the Selves Questionnaire, modified to examine the self "as a family member," and other participants were asked to complete the Selves Questionnaire, modified to examine the self "as a student." All participants completed the Selves Questionnaire twice: once at their university library and once at their homes. Administrations were counter-balanced and one week apart. Results indicated that the magnitude of ideal discrepancies is moderated by location relevance, such that discrepancies increase when assessed in a more relevant location (i.e., self-discrepancies from the self as a student perspective were larger when assessed in the university library than at home). No significant results were observed for ought discrepancies.

Finally, Higgins et al. (1986) primed participants differentially so as to manipulate accessibility to either their ideal discrepancies or ought discrepancies. In the ideal discrepancy priming condition, they asked participants to write about the kind of person they and their parents would ideally like them to be and whether that ideal changed over time (e.g., as participants matured). In the ought discrepancy priming condition, they asked participants to write about the kind of person they and their parents thought they should be and whether those expectations changed over time. Results indicated that the accessibility manipulations

induced greater levels of distress associated with the corresponding negative emotion for individuals who had large self-discrepancies.

Despite the variety of models for accessibility manipulations available in the literature, manipulations that addressed specifically and directly accessibility to thoughts associated with a social role were not found in the published literature. The current study's manipulation was untested prior to its implementation in the current study and is a limitation. Future research employing accessibility manipulations should include a pilot test of the manipulation's ability to influence self-discrepancy accessibility. Researchers should consider requesting participants to write about a more specific type of interaction (e.g., meal-time interaction, birthday interaction) so as to solicit experiences from a single context, which may more uniformly trigger thoughts of motherhood. Another approach would be to incorporate a visual component (i.e., video or pictures) so as to enhance the imagery associated with motherhood, which could also improve effectiveness. Nevertheless, Study 2 revealed partial support for self-discrepancy theory when applied to a social role.

CHAPTER 4

STUDY 3

Higgins (1987, 1989a) maintains that accessibility moderates the relationship between self-discrepancies and emotional distress. It has been shown that differentially manipulating the accessibility of participants' self-discrepancies corresponds to changes in emotional outcomes (e.g., Boldero & Francis, 2000; Higgins et al., 1986; Phillips & Silvia, 2005). Study 3 attempted to extend these findings to a sample of mothers. Study 3 featured three conditions, in which self-discrepancies were differentially primed such that one condition was primed for increased accessibility of the ideal discrepancy from the "self as mother" perspective, one condition was primed for increased accessibility of the ought discrepancy from the "self as mother" perspective, and one condition served as a control. This study attempted to determine whether the strength of the relationship between a specific type of discrepancy (i.e., ideal or ought) and its predicted emotional outcome (i.e., dejection- or agitation-related emotions) changed as a function of differential priming of the ideal and ought self-discrepancies from the "self as mother" perspective. Hypotheses for this study were:

H1: Ideal discrepancies from the "self as a mother" perspective would be positively associated with dejection-related emotions while controlling for ought discrepancies and agitation-related emotions.

H2: Ought discrepancies from the "self as a mother" perspective would be positively associated with agitation-related emotions while controlling for ideal discrepancies and dejection-related emotions.

H3: The strength of the relationship between ideal discrepancies and dejection-related emotions would be moderated by increased accessibility of the ideal "mother self-discrepancy," with a stronger association found for those in the ideal discrepancy priming condition compared to the control condition and the ought primed condition.

H4: The strength of the relationship between ought discrepancies and agitation-related emotions would be moderated by increased accessibility of the ought "mother self-discrepancy," with a stronger association found for those in the ought discrepancy priming condition compared to the control condition and the ideal primed condition.

Method

Participants and Procedures

Mothers living in the United States (n = 184) participated in this study. Participants were recruited via MTurk and screened according to the procedures described for Study 2. After reading an informed consent document and agreeing to participate in the study, participants were randomly routed to take a survey for either the control condition, the ideal discrepancy priming condition, or the ought discrepancy priming condition. The order of the measures in the survey for each condition was the same: self-discrepancy measure, manipulation, depression and anxiety measure, affect measure, demographic items, and

additional measures unrelated to this study. Presentation of the depression and anxiety measure and affect measure was counter balanced, although only the affect measure was used in this study's analyses.

Participants who were routed into the ideal discrepancy priming condition were asked to write a brief description of an interaction with their child when they did not engage in behavior consistent with that of an ideal mother. Specifically, they were instructed, "*In the space provided, please write about an interaction with your child in which you did not behave in the way you ideally would have liked or wished you could have behaved. In other words, write about an interaction with your child when you did not act how an ideal mother would have acted. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and your child were feeling*," (see Appendix G). This priming activity was designed to improve accessibility to the ideal self-guide from the "self as mother" perspective.

Participants who were routed into the ought discrepancy priming condition were asked to write a brief description of an interaction with their child in which they did not engage in behavior consistent with obligatory maternal behavior. Specifically, they were instructed, "*In the space provided, please write about an interaction with your child in which you did not behave in the way you think you should have behaved or were obligated to behave. In other words, write about an interaction with your child when you did not act how you think a mother should have acted. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and your child were feeling.*" This priming activity was designed to improve accessibility to the ought self-guide from the "self as a mother" perspective.

Participants who were routed into the control condition were asked to write a brief description of an interaction with a store check-out clerk. Specifically, they were instructed, "*In the space provided, please describe an interaction with a check-out clerk that did not go well. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and the check-out clerk were feeling*." This activity was designed to be a neutral analogue to the self-guide priming activities in the experimental conditions.

All participants were paid $0.50 for completing the survey. A total of 185 participants completed the survey. Participants who did not provide acceptable responses to demographic items were dropped from analyses (e.g., indicated sex was male, $n = 5$; did not provide any demographic information, $n = 1$; did not indicate a child lived in the home, $n = 17$). Participants who failed the attention-check items were also dropped from analyses ($n = 3$). In addition, data from participants who took longer than three standard deviations above the mean completion time ($M = 15.36$, $SD = 7.24$) were dropped from analyses ($n = 7$).

The final sample consisted of 147 mothers (control condition = 50; ideal discrepancy experimental condition = 49; ought discrepancy experimental condition = 48) who ranged in age from 19 to 52, were mostly (74%) White (10% African American, 5% Asian, 5% biracial, 2% Hispanic, 1% American Indian/Alaska Native, 1% Native Hawaiian/Pacific Islander), and (66%) married (14% cohabitating, 5% divorced/separated, 12% dating/single). The majority of participants (61%) had earned an associate's degree or higher (28% had "some college/university," 12% had graduated high school, 1% did not complete high school). The modal reported household income was $31,000-$50,000. Most participants indicated that they did not have a current diagnosis of a depressive or anxiety disorder (79%) or a history of

a diagnosed depressive or anxiety disorder (68%). Participants had an average of 1.78 children (*SD* = 1.10) with an average age of 7.42 years (*SD* = 4.97).

Measures

Participants in all three conditions completed the same demographic, self-discrepancy, attentiveness items, depression and anxiety, and affect measures as described in Study 2, as well as two measures unrelated to this study. The Agitation and Dejection scales demonstrated acceptable internal consistency (α = .74 and .86, respectively) in this study.

Results

Preliminary Analyses

Before primary regressions were run, preliminary analyses were conducted to survey the data. First, one univariate outlier was detected on the agitation variable and was corrected using the procedure described by Tabachnick and Fiddell (2013), as previously discussed. Then, dependent variable normality was assessed. Their score distributions were both moderately positively skewed, suggesting non-normality. In addition, histograms and significant Shapiro-Wilk statistics for Agitation and Dejection score distributions (W = .88, p < .001; W = .95, p < .001, respectively) indicated non-normality. As such, the dependent variables were transformed using the procedures recommended by Tabachnick and Fidell (2013). Square root transformations produced the most improvements overall, though the

Shapiro-Wilk statistic for Agitation remained significant ($W = .95$, $p < .001$), indicating that the distribution, though improved, remained non-normal. Square-root transformations resulted in a normal distribution for Dejection.

Next, descriptive analyses were conducted (see Table 11), followed by a MANOVA to identify between-condition differences on continuous demographic variables. Nine participants who indicated that they were stay-at-home mothers who worked 80 or more hours per week were excluded from all descriptive analyses concerning this variable. MANOVA results did not indicate any significant relationships between the experimental conditions and continuous demographic variables, Wilk's $\Lambda = 0.91$, $F(18, 244) = 0.62$. As there were no between-condition differences on the Dejection and Agitation variables, it appears that the manipulations designed to differentially influence accessibility to self-discrepancies were unsuccessful.

In addition, chi-square analyses were run to determine if there were differences by condition on the categorical demographic variables. Categorical demographic variables were collapsed into groupings as described in Study 1. Chi-square analyses indicated a significant relationship between experimental condition and education (see Table 12). Analysis of Haberman adjusted standardized residuals (Haberman, 1973) revealed that the statistical significance was due to a higher than expected number of participants in the control condition who had some college/two-year degree (actual $n = 26$, expected $n = 20.4$) and a lower than expected number of participants in the control condition who had a high school diploma or less (actual $n = 0$, expected $n = 5.8$).

Table 11

Study 3 Descriptive Statistics and MANOVA Comparing Continuous Variables by Condition

	Total Sample		Control Condition[a]		Ideal Priming Condition[b]		Ought Priming Condition[c]	
Variable	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Maternal age in years	33.74	7.20	33.06	7.39	34.21	6.19	34.02	7.99
Number of children	1.81	1.12	1.85	1.01	1.54	0.77	2.02	1.46
Mean child age	7.61	4.97	6.94	4.92	7.55	4.44	8.41	5.49
Hours worked/wk	22.42	17.64	22.98	18.73	21.21	16.72	22.98	17.61
Income	4.33	2.01	4.19	2.66	4.31	1.83	4.51	1.89
Ideal SD	1.92	1.09	1.92	1.96	1.80	1.49	1.68	1.23
Ought SD	1.08	1.12	1.05	1.06	1.14	1.13	1.04	1.08
Agitation	1.04	0.33	1.05	0.30	1.05	0.38	1.05	0.33
Dejection	1.23	0.41	1.21	0.44	1.29	0.40	1.19	0.40

Note. Self-discrepancy is abbreviated as SD.

[a]$n = 50$; [b]$n = 49$; [c]$n = 48$.

* $p < .05$, ** $p < .01$.

Table 12

Study 3 Chi-Square Analyses Between Categorical Demographic Variables and Experimental Condition Assignment

	Pearson χ^2 value	df
Romantic relationship status x Experimental condition	1.65	2
Education x Experimental condition	11.28*	4
Employment x Experimental condition	0.00	2
Ethnicity x Experimental condition	1.81	2

* $p < .05$, ** $p < .01$.

Pearson bivariate correlations were run to identify relationships among key variables and demographic control variables. Pearson bivariate correlation results (see Table 13) indicated that ideal discrepancies were positively correlated with ought discrepancies at a degree consistent with what was observed in Study 2. In addition, agitation was positively correlated with dejection. Ideal discrepancies were positively correlated with dejection. Ought discrepancies were not correlated with agitation but were correlated with dejection at a trend level, which was unexpected. Results also indicated that maternal age and number of children were negatively correlated with agitation and child age was negatively correlated with dejection, indicating the need to control for them in the primary regressions.

Table 13

Study 3 Bivariate Correlations among Primary Variables

Variable[a]	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1. Maternal Age	1.00								
2. Number of Children	.18*	1.00							
3. Mean Child Age	.73***	.26**	1.00						
4. Hours worked/wk	.03	-.19*	.05	1.00					
5. Income	.29***	.03	.15^{+}	.09	1.00				
6. Dejection	-.14^{+}	-.12	-.18*	-.02	.01	1.00			
7. Agitation	-.20*	-.16	-.09	.12	-.15^{+}	.56***	1.00		
8. Ideal SD	-.15^{+}	.20*	-.11	-.12	.05	.22**	-.03	1.00	
9. Ought SD	-.13	.14	-.12	-.22**	-.10	.16^{+}	-.09	.54***	1.00

[a] $n = 147$

$^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

To examine the categorical demographic variables, a factorial MANOVA was run to identify relationships among key variables and demographic controls for the primary regressions. Factorial MANOVA results (see Table 14) indicated significant findings for romantic relationship status, such that single/dating/divorced participants reported greater agitation (M = 1.21, standard error = 0.08), but not dejection, than married/cohabitating participants (M = 1.00, standard error = 0.04). No significant findings were observed for ethnicity, education level, or employment. As such, demographic variables to be controlled for in the primary regressions are maternal age, number of children, child age, education, and romantic relationship status.

Primary Analyses

Hierarchical multiple regression was used to determine a discrepancy's ability to uniquely predict negative emotion (Hypotheses 1 and 2). In all analyses, the alternate discrepancy score and emotional outcome were controlled. Two dummy variables were created for the three-group education variable; that is, dummy variables indicating participants had only a high school education or some college were created, making having a bachelor degree or beyond the comparison condition. To test if ideal discrepancies uniquely predict dejection-related emotions from the "self as a mother" perspective, control variables, ought discrepancy, and agitation were entered in Step 1 of the hierarchical regression model, and ideal discrepancy was entered in Step 2. The change in R^2 was statistically significant, indicating that Hypothesis 1 was supported (see Step 2 of Table 15). Similarly, to test if ought discrepancies uniquely predicted agitation-related emotions from the "self as a mother"

Table 14

Study 3 Factorial MANOVA and *T*-Test Results for Primary Categorical Variables' Relationship to Dejection and Agitation

Effect	Wilk's Lambda	F	Hypothesis df	Error df
Intercept	0.16	302.06	2	118.00
Relationship Status	0.94*	3.58	2	118.00
Employment	0.97	1.61	2	118.00
Education	0.93	2.17	4	236.00
Race	1.00	0.02	2	118.00
Relationship Status x Employment	0.99	0.62	2	118.00
Relationship Status x Education	0.93	2.26	4	236.00
Relationship Status x Race	0.96	2.66	2	118.00
Employment x Education	0.92	2.57	4	236.00
Employment x Race	0.96	2.52	2	118.00
Education x Race	0.98	0.56	4	236.00
Relationship Status x Employment x Education	0.94	3.62	2	118.00
Relationship Status x Employment x Race	0.98	1.43	2	118.00
Relationship Status x Education x Race	0.99	0.80	2	118.00
Employment x Education x Race	1.00	0.65	2	118.00
Relationship Status x Employment x Education x Race	1.00	--	0	118.50

	T-Value
Dejection	-1.52
Agitation	-3.90***

* $p < .05$, ** $p < .01$, *** $p < .001$.

perspective, control variables and ideal discrepancy and dejection were entered in Step 1 of the hierarchical regression model, and ought discrepancy was entered in Step 2. The change in R^2 was not statistically significant, indicating that Hypothesis 2 was not supported (see Step 2 of Table 16).

Hierarchical multiple regressions were used to determine if the experimental manipulations influenced the relationship between ideal discrepancies and dejection-related emotions, as well as ought self-discrepancies and agitation-related emotions, respectively (Hypotheses 3 and 4). Four interaction terms were created, two related to the ideal discrepancy and two related to the ought discrepancy. Two dummy variables were created for the three experimental conditions (i.e., ideal self-guide priming manipulation and ought self-guide priming manipulation) in which the control condition was the comparison group. Interaction terms were created by multiplying the appropriate discrepancy variable, which was centered, by one of the two dummy variables. Step 1 of the hierarchical regression model included the control variables (i.e., demographic controls and the self-discrepancy and the emotional outcome being controlled). Step 2 included the self-discrepancy being tested. Step 3 included the two dummy variables indicating experimental conditions. Step 4 included the two interaction variables that corresponded to the self-discrepancy entered in Step 2. The change in R^2 in the final step of the regression testing the influence of the manipulation on the relationship between ideal discrepancies and dejection was not significant (see Table 15), indicating that Hypothesis 3 was not supported. The change in R^2 in the final step of the regression testing the influence of the manipulation on the relationship between ought discrepancies and agitation was not significant (see Table 16), indicating that Hypothesis 4 was not supported.

Table 15

Study 3 Hierarchical Multiple Regression Analyses Predicting Dejection from Ideal Self-Discrepancies

			Unstandardized Coefficients		Standardized Coefficients
Predictor	ΔR^2	ΔF	*B*	Std. Error	β
Step 1	0.37***	9.19			
Constant			0.22	0.23	--
Relationship Status			0.04	0.08	0.03
Maternal Age			0.01	0.01	0.18
Education Level (Comparison group = Bachelor Degree)					
High School			-0.05	0.06	-0.06
Some College			0.04	0.10	0.03
Number of Children			-0.01	0.03	-0.03
Mean Child Age			-0.02*	0.01	-0.25
Agitation			0.73***	0.09	0.59
Ought SD			0.07**	0.03	0.19
Step 2	0.02*	4.00			
Ideal SD			0.05*	0.17	0.17
Step3	0.00	0.31			
Priming Manipulation (comparison condition = Control)					
Ideal			0.05	0.07	0.06
Ought			0.01	0.07	0.01
Step 4	0.00	0.01			
Ideal x Ideal SD			-0.01	0.06	-0.10
Ought x Ought SD			-0.01	0.06	-0.02
Total R^2	0.39				
Total F	5.98***				

Note. Self-discrepancy is abbreviated as SD. Romantic relationship status groups were coded as 0 = single/dating/divorced and 1 =married/cohabitating.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 16

Study 3 Hierarchical Multiple Regression Analyses Predicting Agitation from Ought Self-Discrepancies

			Unstandardized Coefficients		Standardized Coefficients
Predictor	ΔR^2	ΔF	*B*	Std. Error	β
Step 1	0.42***	13.89			
Constant			0.98	0.16	--
Relationship Status			-0.18**	0.06	-0.21
Maternal Age			-0.01*	0.01	-0.23
Education Level (Comparison group = Bachelor Degree					
High School			0.08	0.05	0.12
Some College			-0.09	0.08	-0.09
Number of Children			-0.00	0.02	-0.01
Mean Child Age			0.01	0.01	0.18
Ideal SD			-0.03*	0.02	-0.16
Dejection			0.45***	0.06	0.55
Step 2	0.01	2.97			
Ought SD			-0.04	0.02	-0.13
Step3	0.00	0.19			
Priming Manipulation (Comparison = Control)					
Ideal			0.01	0.06	0.01
Ought			0.04	0.06	0.06
Step 4	0.00	0.25			
Ideal x Ideal SD			0.00	0.05	0.00
Ought x Ought SD			-0.03	0.05	-0.06
Total R^2	0.43				
Total F	7.19***				

Note. Self-discrepancy is abbreviated as SD. Romantic relationship status groups were coded as 0 = single/dating/divorced and 1 =married/cohabitating.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

The current study found that ideal discrepancies were positively correlated with dejection, and ought discrepancies were positively correlated with dejection at a trend level but were uncorrelated with agitation. However, Study 3 replicated a key finding from Study 2: ideal discrepancies uniquely predict dejection, even after controlling for the variance shared between ideal and ought discrepancies and that between dejection and agitation. This robust finding is consistent with other studies that have found only partial support for the predictions of self-discrepancy theory (e.g., Bruch et al., 2000; McDaniel & Grice, 2008; Phillips & Silvia, 2005). The replication of this finding suggests that extending self-discrepancy theory to the social role of mother may be appropriate, especially as it relates to mothers' perceptions of not achieving their ideal standard and the associated dejection they experience.

The main objective of Study 3, however, was to determine if differentially manipulating accessibility to a specific type of self-discrepancy (i.e., either ideal or ought discrepancy) influenced the strength of the relationship between that self-discrepancy and its predicted negative emotional outcome (i.e., either dejection or agitation). Determining this, of course, depended upon successful manipulations. Successful manipulations would have activated *specific* self-discrepancies (i.e., either ideal or ought), which would have corresponded with greater degrees of specific negative emotion (i.e., either dejection or agitation; Higgins et al., 1986). As there were no differences among conditions in their dejection and agitation scores, it appears that the manipulations were unsuccessful.

The manipulations occurred after participants completed the self-discrepancy measure, as they were intended to trigger thoughts associated with not meeting the standards of

participants' ideal or ought self-guides for the social role of mother (i.e., self-discrepancies), so as to strengthen the relationship with resulting negative emotions. This is consistent with the procedure of Higgins et al. (1986); however, in that study, affect was measured both before and after the differential priming manipulations in order to elucidate the change in affect produced by the manipulations. The current study measured affect only after the manipulation, so it is unknown whether the manipulation had any influence on negative emotions. This is a clear limitation to the design.

An argument could be made for presenting the manipulation before the self-discrepancy measure, as the manipulations could trigger thoughts associated with a particular self-guide, in addition to triggering thoughts of the discrepancies between one's actual self and a particular self-guide. Presenting the manipulation before the self-discrepancy measure has no precedence in the literature, per se, though two of the three studies that have attempted to manipulate self-discrepancy accessibility employed an environmental manipulation that was presented simultaneously with the self-discrepancy measure. Phillips and Silvia (2005) attempted to increase self-discrepancy accessibility by having participants complete the Selves Questionnaire while sitting in front of a large mirror, which was intended to highlight self-awareness and thereby self-discrepancies. Results indicated that for participants in the experimental condition (i.e., sitting in front of the mirror) only, self-discrepancies were generally associated with negative emotion, but not in the specific ways predicted by self-discrepancy theory. Boldero and Francis (2000) attempted to increase self-discrepancy accessibility to having participants complete the Selves Questionnaire in geographical locations relevant to the social role self-discrepancies that were being measured (e.g., self-as-student was measured in a university library and self-as-family member was measured at

home). Results indicated that ideal discrepancies measured in a relevant location were more strongly associated with dejection than ideal discrepancies measured in an irrelevant location. Analyses concerning ought discrepancies yielded nonsignificant findings.

Though no models illustrating successful manipulations differentially targeting specific types of self-discrepancies from a social role perspective have been published, the manipulations used in the current study were influenced by those described by Higgins et al. (1986), who asked participants to write about the ideal self in terms of what they hoped for themselves and what their parents wanted for them. The current study's self-discrepancy manipulations asked participants to write about an interaction with their child in which their behavior did not align with the behaviors they would expect from an ideal mother or the kind of mother they believed they should be. The intention was to trigger awareness of attributes consistent with either participants' ideal or ought self-as-mother self-guides by having them write about a time in which they did not achieve either their ideal or ought self-guide. As in Study 2, participants were asked to provide as much detail about their interactions as possible. Visual inspection of participant responses suggested that many provided adequate details, though some provided minimal responses (e.g., "*I got mad and yelled at her"*). It is possible that variability in the number of details provided contributed to the manipulation's ineffectiveness. In addition, the negative valence of the language in the current study's manipulation may have been problematic, as the language of Higgins et al.'s manipulations was positively valenced. A significant limitation of the current study was employing a previously untested manipulation. Given that the primary object of the current study hinged upon a successful manipulation, no support was found for the hypothesis that differentially manipulating accessibility to specific self-discrepancies influences the strength of the

relationship between self-discrepancy and negative emotion. Future research should consider pilot-testing a variety of manipulations (e.g., written narrative, pictorially-based, video-based, combination of media) with a pre- and post-manipulation affect measure, so as to better identify change in affect magnitude as it relates to self-discrepancies.

CHAPTER 5

GENERAL DISCUSSION

The studies presented here had the overarching goal of extending self-discrepancy theory to a population of mothers, both in terms of global self-discrepancies (i.e., self-as-person) and as they relate to the specific social role context of mother (i.e., self-as-mother). The secondary objective was to determine if mothers' evaluations of themselves were related to emotional distress (e.g., symptoms of depression and anxiety). Study 1 sought to provide more evidence for the application of self-discrepancy theory to a sample of mothers. Study 2 sought to determine whether the specificity of the relationships between self-discrepancies and negative emotions could be observed in a sample of mothers, as well as whether self-discrepancy accessibility moderated the strength of the relationship between self-discrepancies and emotional distress within the specific social role of mother. Study 3 sought to extend Study 2 by attempting to differentially manipulate accessibility to a specific self-discrepancy to further explain the nature of the relationship between self-discrepancies and emotional distress.

Minimal support was found for the predictions of self-discrepancy theory in a sample of mothers when self-discrepancies were assessed from a global, self-as-person perspective. No significant findings were observed from the regression analyses testing the unique associations between ideal discrepancies and symptoms of depression and between ought

discrepancies and symptoms of anxiety. Trend-level positive correlations were observed between ideal discrepancies and symptoms of depression and between ought discrepancies and symptoms of depression, an association that might achieve statistical significance in a larger sample. It should be noted that these correlations (both $r = .19$) are smaller than what have been reported elsewhere (e.g., .25-.42; Boldero & Francis, 2000; Polasky & Holahan, 1998; Phillips & Silvia, 2005; Strauman, 1992). One possible explanation for this is that mothers may experience less negative emotion related to self-discrepancies than do college students. Research has demonstrated a negative correlation between age and depression, anxiety (Henderson et al., 1998), and neuroticism (Henderson et al., 1998; Srivastava, John, Gosling, & Potter, 2003), especially among women. As the mean age of the mothers in the samples of the three studies were well above that of a typical undergraduate sample, it may be that even in the presence of self-discrepancies, adult mothers may experience less emotional distress.

Another possible explanation for the relatively weak correlations between self-discrepancies and negative emotion could be that mothers may think about their identities less in terms of themselves as "people" and more in terms of a social role (e.g., mother, spouse/partner), thereby rendering global self-discrepancies (i.e., self-as-person) less important and distressing. Social domain (e.g., family, friendship, religious affiliation) centrality has been shown to influence the relationship between self-discrepancies and negative emotion (Boldero & Francis, 2000), such that ideal discrepancies uniquely predicted dejection only when they were assessed in the context of participants' most important domain (e.g., ideal discrepancies assessed from the perspective of the most important domain); however, ought discrepancies uniquely predicted agitation only when they were assessed in

the context of participants' *least* important domain. If the mothers in the three studies presented here ranked being a mother as the most important domain to their self-concept, the findings of Boldero and Francis could help explain why ideal discrepancies uniquely predicted dejection and why ought discrepancies did not predict agitation.

As previously mentioned, some support for the extension of self-discrepancy theory to the social role of mother was observed, as the relationship between ideal discrepancies and dejection was replicated across two studies. The finding was robust, as the analyses controlled for the variance shared by the alternative self-discrepancy and emotion (i.e., ought discrepancies and agitation). Correlations across the two studies revealed different patterns. Study 2 found that both types of self-discrepancies were positively correlated to both types of negative emotion, whereas Study 3 found that ideal discrepancies were positively correlated only to dejection and ought discrepancies were correlated with neither dejection nor agitation. The only difference between Studies 2 and 3 were the manipulations, and the manipulations were intended to influence self-discrepancy accessibility, so it is unclear why such an inconsistent pattern of correlations would be observed. Nevertheless, the correlations indicate a relationship between self-discrepancies and negative emotion more broadly, which supports previous research (e.g., Ozgul et al., 2003; Polasky & Holahan, 1998; Tangney et al., 1998). It may be the case that, rather than relating to specific negative emotions, self-discrepancies may be more strongly related to negative affect, which is a shared component of depression and anxiety (Watson et al., 1988). As the current study did not specifically measure negative affect, future self-discrepancy research should explore this idea by including an empirically validated affect measure, such as the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988).

Although robust support was found for the specific ideal discrepancy-dejection relationship, only minimal support was found for the general ought discrepancy-emotional distress relationship; no support was found for the specific ought discrepancy-agitation relationship. This is not inconsistent with the literature, as the relationship between ideal discrepancies and dejection has received more support overall than that between ought discrepancies and agitation (e.g., Bruch et al., 2000; Fairbrother & Moretti, 1998; McDaniel & Grice, 2008; Rodebaugh & Donahue, 2007; Scott & O'Hara, 1993). However, it is possible that inconsistent ought discrepancy findings could be related to the point of view from which they are assessed. For instance, when assessing self-discrepancies, some researchers have examined the ought self-guides from one's own standpoint (e.g., Boldero & Francis, 2000; Ozgul et al., 2003; Phillips & Silvia, 2005, 2010; Tangney et al., 1998), whereas others have examined it from the standpoint of another, such as a parent, spouse, or friend (e.g., Alexander & Higgins, 1993; Bruch et al., 2000; Scott & O'Hara, 1993; Strauman & Higgins, 1988), and still others have examined ought self-guides from both own- and other-standpoints (e.g., Higgins et al., 1985, 1986; Strauman, 1992; Van Hook & Higgins, 1988). Ideal discrepancies, on the other hand, are most often assessed from one's own standpoint, given that the ideal self-guide is about personal wishes, hopes, and aspirations. Consistently assessing ideal discrepancies from the same point of view (i.e., one's own standpoint), may contribute to more consistent findings in the literature, whereas the greater variability in standpoints from which ought discrepancies are assessed may contribute to its underwhelming support in the literature.

Assessing self-discrepancies from multiple standpoints can be taxing to participants (e.g., Hardin & Lakin, 2009), and in the interest of simplifying instructions, the current

studies all assessed both types of self-discrepancies from participants' own standpoints. However, that decision may have contributed to the lack of ought discrepancy findings. Moretti and Higgins (1999a) suggest that because females are socialized to be more attentive and yielding to the expectations of others, ought discrepancies from the standpoint of other could be more salient (and related to more emotional distress) than those of one's own standpoint. One study found that self-discrepancies consisting of a combination of attributes from both own- and other-standpoints predicted emotional functioning for women but not men (Moretti & Higgins, 1999b). This supports the idea that women may be especially sensitive to the expectations they believe others have of them. Given the results of the current studies, which assessed the ought discrepancy from the own-standpoint (rather than that of other), additional research is warranted to explore the impact standpoint may have on the relationship between self-discrepancies and negative emotion. Toward this end, future research should consider comparing results from analyses with ought discrepancies assessed from participants' own standpoints, as well as those of a significant other (e.g., spouse/partner, close friend, parent, society).

Higgins (1987, 1989a) argues that accessibility is a prerequisite for a self-discrepancy to influence negative emotion. As previously discussed, the manipulations in the current studies were designed to increase self-discrepancy accessibility so as to strengthen the relationship between self-discrepancies and negative emotion. They appear to have been unsuccessful because no significant differences in negative emotion were observed in the experimental conditions compared to the control conditions. As discussed, the manipulations may not have been evocative or poignant enough to trigger participants' self-discrepancies. A suggestion for future research to improve upon and then test accessibility manipulations is to

activate multiple senses, perhaps by having participants listen to audio or view video or pictures of a parent-child interaction, in addition to writing about their own experiences.

Another possible explanation for this could be that the social role of mother is chronically activated by the demands of daily life (e.g., organizing child care, child transportation, assisting with homework, meal preparation). Chronic activation may have limited potential experimental manipulation effects. In addition, MTurk workers elected to engage in a "Psychological Survey for MOTHERS." The title of the HIT may have been adequate to activate motherhood self-guides, which may have inhibited the experimental effect of the manipulations in Studies 2 and 3. One possible way to circumvent the possible activation effects of the HIT title would be to change the title to "Psychological Survey for WOMEN" and simply only include participants who indicated they were mothers in the analyses. Given that multiple studies have been published supporting the idea that self-discrepancies more directly influence negative emotions when they are triggered in some way (Boldero & Francis, 2000; Higgins et al., 1986; Strauman, 1992), more research is needed designing effective manipulations.

Limitations

Although the current studies feature several strengths (e.g., non-college sample, experimental design), they also feature limitations. Although one of the objectives of the studies was to extend self-discrepancy theory to a new sample (i.e., mothers), the findings may not generalize to all mothers, as the current samples were predominantly White, educated, middle-class mothers. It is unknown whether similar findings would be observed in

minority samples or in samples of various socioeconomic statuses. In addition, the mothers in this sample had children with a broad age range, contributing to the heterogeneity of their experiences as mothers. Ideal and ought self-guides for the social role of mother may be more relevant to mothers of very young children, as they would have had less time to achieve their ideal and ought standards, which could potentially increase self-discrepancy magnitude. It may also be the case that mothers of adolescents are more concerned about meeting their self-standards for parenting, as they have less time remaining to influence their children before adulthood. Given such possibilities, examining these relationships among groups of parents with children of similar ages may enhance researchers' understanding of them. Moreover, the manipulations designed to increase self-discrepancy accessibility were previously untested, which may have contributed to the inconsistent and null findings, as previously discussed.

Clinical Implications

Overall, the current studies demonstrated that mothers experience depressive emotions related to perceived discrepancies between the kind of mother they would ideally like to be and the kind of mother that they believe themselves to be. This is concerning, as both clinical and subclinical maternal depression are associated with negative family and child outcomes (e.g., Benazon & Coyne, 2000; Downey & Coyne, 1990; Lovejoy et al., 2000). As research continues to identify factors that contribute to maternal mental health problems, interventions can be further refined to maximize their ability to produce clinically meaningful change. For example, clinicians treating mothers presenting with depressive symptoms may want to consider cognitive factors that contribute to their clients' symptoms, such as the standards

against which clients measure themselves. Conversations about those standards may help clients recognize that their standards may be too stringent. Alternatively, such conversations could facilitate an exploration of the specific values mothers attribute to motherhood, which may allow therapists and clients to identify behaviors consistent with those broader values. Developing a larger behavioral repertoire consistent with clients' values may help them reconcile their actual selves with their ideal or ought selves. In addition, prenatal classes offered by clinics and hospitals could incorporate psychoeducation into their curricula, such that expectant mothers are informed that there are many ways to be a "good mother." Curricula could also include psychoeducation on the interconnections among thoughts, behaviors, and emotions, as well as how maternal mental health influences family and partner well-being.

Conclusion

Although self-discrepancy theory has garnered mixed support in the literature, the link between not achieving a self-standard and the experience of negative emotion has been well documented. Minimal work has been published on self-discrepancies within the context of social roles. The current studies tested self-discrepancy theory in a sample of mothers both from a global "self as person" perspective, and from a social role (i.e., mother) perspective. Results indicated that self-discrepancies were associated with negative emotion, in general. Support for only one of self-discrepancy theory's specific predictions was observed, namely, ideal discrepancies are associated with feelings of dejection. This robust result, though in need of replication and refinement, suggests that aspects of self-discrepancy theory can be

successfully applied in a social role context and may inform clinical treatment of mothers with depressive symptoms.

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APPENDICES

APPENDIX A

INFORMED CONSENT DOCUMENTS

Informed Consent Document for Study 1

I agree to participate in the research project entitled Motherhood: Social Role and Emotions. I understand that this study is for mothers who have at least one non-adult child (18 years old or younger) living with them. I understand that my participation in this study will take approximately 30 minutes and will ask me to answer questions about myself, my emotions, self-esteem, parenting, and what social roles I have in my life. I understand that I may experience some emotional discomfort when answering these questions, and may skip any questions if I feel uncomfortable. I understand that the information I provide will be used to understand how mothers view themselves. I have been informed that I will be paid $0.30 as compensation for my time. I understand that all the information collected will remain anonymous and will only be available to the researchers conducting the study. Any presentations, reports, or publications based on the data collected in this study will use group data only and there will be no way to connect me to the responses I provide.

I understand that if I have questions about my participation, I can contact the researcher below. I understand that I am under no obligation to participate in this study and may discontinue at any time without prejudice. I understand that all responses given by me will be kept strictly confidential and used for research purposes only.

Any questions about the study should be addressed to Nicole Holmberg or Dr. Laura Pittman. If you wish further information regarding your rights as a research participant, you may contact the Office of Research Compliance at Northern Illinois University at (815) 753-8588.

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By clicking "next" you certify that you are a mother who is 18 years of age or older and that you have reviewed the above statements and consent to participate in this study.

Next

Informed Consent Document for Studies 2 & 3

I agree to participate in the research project entitled Motherhood: Social Role and Emotions. I understand that this study is for mothers who have at least one non-adult child (18 years old or younger) living with them. I understand that my participation in this study take approximately 30 minutes to complete and will ask me to answer questions about myself, my emotions, self-esteem, parenting, and what social roles I have in my life. I will also be asked to write a paragraph about my experiences interacting with someone else. I understand that I may experience some emotional discomfort when answering these questions and may skip any questions if I feel uncomfortable. I understand that the information I provide will be used to understand how mothers view themselves. I have been informed that I will be paid $0.30 as compensation for my time. I understand that all of the information collected will remain anonymous and will only be available to the researchers conducting the study. Any presentations, reports, or publications based on the data collected in this study will use group data only and there will be no way to connect me to the responses I provide.

I understand that if I have questions about my participation, I can contact the researcher below. I understand that I am under no obligation to participate in this study and may discontinue at any time without prejudice. I understand that all responses given by me will be kept strictly confidential and used for research purposes only.

Any questions about the study should be addressed to Nicole Holmberg or Dr. Laura Pittman. If you wish further information regarding your rights as a research participant, you may contact the Office of Research Compliance at Northern Illinois University at (815) 753-8588.

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By clicking "next" you certify that you are a mother who is 18 years of age or older and that you have reviewed the above statements and consent to participate in this study.

Next

APPENDIX B

SELF-DISCREPANCY MEASURES

STUDY 1 SELF-DISCREPANCY MEASURE

You will be asked to list qualities that you might apply to yourself. You will be asked to list these for two types of "self."

- Should self: Traits that you think you ought to possess; the type of person you have a duty, obligation, or responsibility to be; the traits you are morally obligated to possess.

- Ideal self: Traits that you would ideally like to possess; the type of person you wish, desire, or hope to be.

How are the should self and the ideal self different?

- An example of how the should and ideal selves are different: I may hope to be *rich* someday; being rich may be a goal I have for myself, but I do not think I have a duty or a moral obligation to be rich. So, *rich* would be a word that describes the type of person I ideally want to be, but it is *not* a word that describes the type of person I think I should be.

Is the should self just more realistic than the ideal self?

- No, not necessarily. Everyone differs in how realistic the traits of the ideal and should selves are, as well as how much they actually possess those traits. For you, just think about who you ideally want to be and who you think you should be, not about which one is more realistic.

For each type of self, think carefully about the type of qualities you are being asked to list. You may use any words you want to describe these different types of self.

Before continuing, please answer the following questions by selecting the best answer:

1. The should self refers to:
   - What I am now
   - What others want me to be
   - My moral obligation

- *Feedback: "My moral obligation" is the correct answer because the should self refers to the traits that you think you ought to possess; the type of person you have a duty, obligation, or responsibility to be; the traits you are morally obligated to possess.*

2. The ideal self is:
   - Unattainable and perfect
   - What I want, dream, or desire to be
   - My normal, usual self

Feedback: "What I want, dream, or desire to be" is the correct answer because the ideal self refers to the traits that you would ideally like to possess; the type of person you wish, desire, or hope to be.

What kind of person do you wish you could be?

Please list five traits of the type of person you would ideally like to be; the type of person you wish, desire, or hope to be.

Trait 1: _____

Trait 2: _____

Trait 3: _____

Trait 4: _____

Trait 5: _____

Now rate how much you wish you could be like each of those words:

Trait 1: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 2: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 3: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 4: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 5: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

What kind of person do you think you should be?

Please list 5 traits of the type of person you believe you should or ought to be; the traits you are morally obligated to possess.

Trait 1: _____

Trait 2: _____

Trait 3: _____

Trait 4: _____

Trait 5: _____

Now rate how much you wish you should be like each of those words:

Trait 1: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 2: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 3: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 4: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 5: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

What kind of person are you?

Rate how much you are CURRENTLY like each of the following traits: [participants' attributes will be loaded into each blank for them]

Trait 1: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 2: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 3: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 4: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 5: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 6: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 7: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 8: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 9: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 10: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

STUDIES 2 AND 3 SELF-DISCREPANCY MEASURE

You will be asked to list qualities that you might apply to yourself as a mother. You will be asked to list these for two types of "self" as a mother.

- Should self: Traits that you think you ought to possess as a mother; the type of mother you have a duty, obligation, or responsibility to be; the traits you are morally obligated to possess as a mother.

- Ideal self: Traits that you would ideally like to possess as a mother; the type of mother you wish, desire, or hope to be.

How are the should self and ideal self different?

- An example of how the should and ideal selves are different: I may hope to be a *funny* mother; being funny may be a goal I have for myself as a mother, but I do not think I have a duty or a moral obligation as a mother to be funny. So, *funny* would be a word that describes the type of mother I ideally want to be, but it is *not* a word that describes the type of mother I think I should be.

Is the should self just more realistic than the ideal self?

- No, not necessarily. Everyone differs in how realistic the traits of the ideal and should selves are, as well as how much they actually possess those traits. For you, just think about the kind of mother you ideally want to be and the kind of mother you think you should be, not about which one is more realistic.

For each type of self, think carefully about the type of qualities you are being asked to list. You may use any words you want to describe these different types of self.

Before continuing, please answer the following questions by selecting the best answer:

1. The should self refers to:
   - The kind of mother I am now
   - The kind of mother others want me to be
   - The kind of mother I am morally obligated to be

   Feedback: "My moral obligation" is the correct answer because the should self refers to the traits that you think you ought to possess as a mother; the type of mother you have a duty, obligation, or responsibility to be; the traits you are morally obligated to possess.

2. The ideal self is:
   - Unattainable and perfect
   - The kind of mother I want, dream, or desire to be
   - The kind of mother I am now

Feedback: "What I want, dream, or desire to be" is the correct answer because the ideal self refers to the traits that you would ideally like to possess as a mother; the type of mother you wish, desire, or hope to be.

What kind of mother do you wish you could be?

Please list 5 traits of the type of mother you would ideally like to be; the type of mother you wish, desire, or hope to be.

Trait 1: _____

Trait 2: _____

Trait 3: _____

Trait 4: _____

Trait 5: _____

Now rate how much you wish you could be like each of those words:

Trait 1: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 2: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 3: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 4: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 5: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

What kind of mother do you think you should be?

Please list 5 traits of the type of mother you believe you should or ought to be; the traits you are morally obligated to possess as a mother.

Trait 1: _____

Trait 2: _____

Trait 3: _____

Trait 4: _____

Trait 5: _____

Now rate how much you wish you should be like each of those words:

Trait 1: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 2: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 3: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 4: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

Trait 5: _____

1	2	3	4	5	6	7
Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

What kind of mother are you?

Rate how much you are CURRENTLY like each of the following traits: [participants' attributes will be loaded into each blank for them]

Trait 1:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 2:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 3:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 4:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 5:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 6:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 7:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 8:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 9:							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely
Trait 10							
	1	2	3	4	5	6	7
	Not at all	A little bit	Somewhat	Medium	Quite a bit	Very much	Extremely

APPENDIX C

DEPRESSION ANXIETY STRESS SCALES

Please read each statement and circle a number 0, 1, 2, or 3 that indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of the time
3 Applied to me very much, or most of the time

		Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree, or a good part of the time	Applied to me very much, or most of the time
1	I found myself getting upset by quite trivial things.	0	1	2	3
2	I was aware of dryness of my mouth.	0	1	2	3
3	I couldn't seem to experience any positive feeling at all.	0	1	2	3
4	I experience breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).	0	1	2	3
5	I just couldn't seem to get going.	0	1	2	3
6	I tended to over-react to situations.	0	1	2	3
7	I had a feeling of shakiness (e.g., legs going to give way).	0	1	2	3
8	I found it difficult to relax.	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended.	0	1	2	3

		Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree, or a good part of the time	Applied to me very much, or most of the time
10	I felt that I had nothing to look forward to.	0	1	2	3
11	I found myself getting upset rather easily.	0	1	2	3
12	I felt that I was using a lot of nervous energy.	0	1	2	3
13	I felt sad and depressed.	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (e.g., elevators, traffic lights, being kept waiting).	0	1	2	3
15	I had a feeling of faintness.	0	1	2	3
16	I felt that I had lost interest in just about everything.	0	1	2	3
17	I felt I wasn't worth much as a person.	0	1	2	3
18	I felt that I was rather touchy.	0	1	2	3
19	I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures or physical exertion.	0	1	2	3
20	I felt scared without any good reason.	0	1	2	3
21	I felt that life wasn't worthwhile.	0	1	2	3
22	I found it hard to wind down.	0	1	2	3

		Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree, or a good part of the time	Applied to me very much, or most of the time
23	I had difficulty in swallowing.	0	1	2	3
24	I couldn't seem to get any enjoyment out of the feelings I did.	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).	0	1	2	3
26	I felt down-hearted and blue.	0	1	2	3
27	I found that I was very irritable.	0	1	2	3
28	I felt I was close to panic.	0	1	2	3
29	I found it hard to calm down after something upset me.	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task.	0	1	2	3
31	I was unable to become enthusiastic about anything.	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing.	0	1	2	3
33	I was in a state of nervous tension.	0	1	2	3
34	I felt I was pretty worthless.	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing.	0	1	2	3
36	I felt terrified.	0	1	2	3

		Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree, or a good part of the time	Applied to me very much, or most of the time
37	I could see nothing in the future to be hopeful about.	0	1	2	3
38	I felt that life was meaningless.	0	1	2	3
39	I found myself getting agitated.	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself.	0	1	2	3
41	I experienced trembling (e.g., in the hands).	0	1	2	3
42	I found it difficult to work up the initiative to do things.	0	1	2	3

APPENDIX D

AFFECT MEASURE

Please indicate the extent to which you **currently** feel each emotion **at this moment**.

Happy					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Calm					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Sad					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Tense					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Satisfied					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Quiet					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Disappointed					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Nervous					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Blue					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Afraid					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Enthusiastic					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal

Discouraged					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Agitated					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Low					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal
Desperate					
0	1	2	3	4	5
Not at all	A little bit	Somewhat	Moderately	A lot	A great deal

APPENDIX E

ATTENTIVENESS ITEMS

I have had a fatal heart attack in the past week.

- True
- False

Butterflies are made of butter and flies.

- True
- False

APPENDIX F

GENERAL DEMOGRAPHIC INFORMATION

Select your sex:
- Male
- Female

Select your country of citizenship:
- United States of America
- [all other countries will be included in the pull-down menu]

What state do you live in?

What is your zip code?

Type your age in years:

Please indicate the racial/ethnic classification that applies to you (mark all that apply).
- American Indian/Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or other Pacific Islander
- White
- Other, please specify:

For each person in your household, please indicate the gender, age, and relationship to you:

Sex: M or F	Age	Relationship to YOU [spouse/partner, parent, biological child, step-child, adopted child, other]	Some children live in more than one house (e.g., joint custody arrangements). Please indicate how much they live in your house. [only in my house, primarily in my house (e.g., 4+ days per week), split 50/50, primarily live in another house, rarely live in my house (e.g., fewer than 1 day per week)]

What is the highest degree you have earned?

- Eighth grade completion
- High school diploma
- Some college/university
- 2 year degree from college/vocational/trade school
- Bachelor's degree
- Master's degree
- Doctoral degree (Ph.D., M.D., J.D., Ed.D., etc.)

What is your romantic relationship status?

- Single/casually dating
- Serious/committed dating relationship and not living together
- Cohabitating
- Married
- Divorced/Separated
- Widowed

Where are you taking this survey?

- At home
- At work
- Public Place (e.g., café, library, school, etc.)

What is your employment status?

- Part-time
- Full-time
- Unemployed but looking for a job
- Stay at home mom, but used to work

How many hours do you work each week?

What is your average yearly household income?

- Less than $15,000
- $15,000 – $20,000
- $21,000 – $30,000
- $31,000 – $50,000
- $51,000 – $70,000
- $71,000 – $90,000
- $91,000 – $110,000
- $130,000 - $150,000
- More than $151,000

Do you currently have a diagnosis of a depressive or anxiety disorder?

Have you ever been diagnosed with either a depressive or anxiety disorder?

Please indicate your agreement or disagreement with the following statements:

My spouse/partner shares a lot of the responsibility for raising our child.

0	1	2	3	4	5
Definitely no/definitely disagree	No/disagree	Generally no/generally disagree	Generally yes/generally agree	Yes/agree	Definitely yes/definitely agree

My spouse/partner is supportive of what I do in raising our child.

0	1	2	3	4	5
Definitely no/definitely disagree	No/disagree	Generally no/generally disagree	Generally yes/generally agree	Yes/agree	Definitely yes/definitely agree

Overall my spouse/partner and I agree on parenting issues.

0	1	2	3	4	5
Definitely no/definitely disagree	No/disagree	Generally no/generally disagree	Generally yes/generally agree	Yes/agree	Definitely yes/definitely agree

Overall my spouse/partner and I cooperate in parenting.

0	1	2	3	4	5
Definitely no/definitely disagree	No/disagree	Generally no/generally disagree	Generally yes/generally agree	Yes/agree	Definitely yes/definitely agree

APPENDIX G

PRIMING MANIPULATIONS

STUDY 2 PRIMING MANIPULATION

Control Condition

In the space provided, please write about the last interaction you had with a store check-out clerk. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions may have been involved.

Experimental Condition

In the space provided, please write about the last interaction you had with your oldest/only child. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and your child were feeling.

STUDY 3 PRIMING MANIPULATION

Control Condition

In the space provided, please describe an interaction with your child that did not go well. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and your child were feeling.

Ideal Experimental Condition

In the space provided, please write about an interaction with your child in which you did not behave in the way you ideally would have liked or wished you could have behaved. In other words, write about an interaction with your child when you did not act how an ideal mother would have acted. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and your child were feeling.

Ought Experimental Condition

In the space provided, please write about an interaction with your child in which you did not behave in the way you think you should have behaved or were obligated to behave. In other words, write about an interaction with your child when you did not act how you think a mother should have acted. We are interested in the details of your interaction, so please include information about when and where the interaction occurred, what was said, and what emotions you and your child were feeling.